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Db 301 CTGAAACATGTCAGACAACTTATTAATCAACAAATTAACAGAAAAATGCTAGAAATACGGCA 360
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QY 361 CTTGCTCGATTAAGGTTTAGAGAGATTCCTTTAGAGCCCTATCAACAGTCACTTGAAGAT 420
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QY 421 TGGCTAGAAAACCGTGTATGATGCAAGAACAGAAAGTGTCTTTATACCAATATATAGCC 480
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Db 421 TGGCTAGAAAACCGTGTATGATGCAAGAACAGAAAGTGTCTTTATATACCAATATATAGCC 480
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QY 481 TTAGAACTTGATTTTCTTAATGCGATGCCCTTTTGGCAATTAGAAACCAAGAGTTCCA 540
| | | | |
Db 481 TTAGAACTTGATTTTCTTAATGCGATGCCCTTTTGGCAATTAGAAACCAAGAGTTCCA 540
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QY 541 TTATTAATGTTATATGCTCAAGCTGCAAAATTTACACCTATTTATATGAGATGCTCT 600
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Db 541 TTATTAATGTTATATGCTCAAGCTGCAAAATTTACACCTATTTATATGAGATGCTCT 600
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Db 601 CTTTGTGTAGTGAATTTGGGCTTACATCGAGAAATTTCAAGTTATTTAGCCGCA 660
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Qy 3601 GAAACCATTAAGTATGATGATTTGAGAAACGAAAGGAAAGTTTATTTGACACAC 3660
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Db 3661 ATAGAAATTAATCTCTTATGAGAAATAG 3687

RESULT 2
US-08-448-170-7
; Sequence 7, Application US/08448170
; Patent No. 5723758
; GENERAL INFORMATION:
; APPLICANT: Payne, Jewel
; APPLICANT: Cummings, David A.
; APPLICANT: Cannon, Raymond J.C.
; APPLICANT: Narva, Kenneth E.
; APPLICANT: Steilman, Steve
; TITLE OF INVENTION: No. 5723758e1 Bacillus thuringiensis Isolate Denoted
; TITLE OF INVENTION: B.t. PS158C2, Active Against Lepidopteran Pests, and Genes
; NUMBER OF SEQUENCES: 10
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: David R. Saliwanchik
; STREET: 2421 N.W. 41st Street, Suite A-1
; CITY: Gainesville
; STATE: Florida
; COUNTRY: USA
; ZIP: 32606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/448,170
; FILING DATE:
; CLASSIFICATION: 424
; APPLICATION NUMBER DATA:
; APPLICATION NUMBER: US 08/069,902
; FILING DATE: 01-JUNE-1993
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/759,247
; FILING DATE: 13-SEPT-1991
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: Saliwanchik, David R.
; REGISTRATION NUMBER: 31,794
; REFERENCE/DOCKET NUMBER: M/S 102D.C1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (904) 375-8100
; TELEFAX: (904) 372-5800
; INFORMATION FOR SEQ ID NO: 7:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3684 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-448-170-7

Query Match 88.6%; Score 3266.6; DB 1; Length 3684;
Best Local Similarity 93.4%; Pred. No. 0;
Matches 3449; Conservative 0; Mismatches 229; Indels 15; Gaps 3;

Qy 1 TTGACTCAATAGGAAATGGAATGAAATTTATTAATGCTTATGATTCAGCTGTA 60
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Db 1141 TCTAATTAATCTGTAAATATATCAATTAAGTTTCAATCTCGAAGGTTTATAGAAACAGATCATTT 1200
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Db 2155 CCAATCTTCAATTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2214
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QY 2275 CAGAGGAAATGACGATATTTAAAGAAATTCAGTCACTACCGGGGACTTTTAATGAG 2334
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DB 2752 AAGCATTAATTAAG 2811
QY 2815 AAGCATTAATTAAG 2874
DB 2812 AAGCATTAATTAAG 2871
QY 2875 GATGCTTTATTTGATGATTTCTCAATATATATGATTAACAAGCGGATCAAAATTTGGCATG 2934
DB 2872 GATGCTTTATTTGATGATTTCTCAATATATGATTAACAAGCGGATCAAAATTTGGCATG 2931
QY 2935 ATTCAATGCGAGATTAATCTGTTCAATGATGATGATGATGATGATGATGATGATGATGAT 2994
DB 2932 ATTCAATGCGAGATTAATCTGTTCAATGATGATGATGATGATGATGATGATGATGATGAT 2991
QY 2995 GTTATCCCGGATGTAATTTGCGGAAATTTTGAAGATTTAGAGAGTCGATTTATCATGCA 3054
DB 2992 GTTATCCCGGATGTAATTTGCGGAAATTTTGAAGATTTAGAGAGTCGATTTATCATGCA 3051
QY 3055 ATCTCCCTTATACGATGCGAGAAATGTCGTTAAATATGATGATTTTAAATATGATGATGCA 3114
DB 3052 ATCTCCCTTATACGATGCGAGAAATGTCGTTAAATATGATGATTTTAAATATGATGATGCA 3111
QY 3115 TGCTGGAATGTAAGAGGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3174
DB 3112 TGCTGGAATGTAAGAGGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3171
QY 3175 ATCCGAGATGAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3234
DB 3172 ATCCGAGATGAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3231
QY 3235 ATCTCCCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3294
DB 3232 ATCTCCCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3291
QY 3295 ATGAGAGAAATTAAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3354
DB 3292 ATGAGAGAAATTAAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3351

QY 3355 ACGGATACAGGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3414
DB 3352 ACGGATACAGGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3411
QY 3415 CGTAAATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3474
DB 3412 CGTAAATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3471
QY 3475 CCGACTTATGAGAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3534
DB 3472 CCGACTTATGAGAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3531
QY 3535 AGAGGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3594
DB 3532 AGAGGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3591
QY 3595 TTCCAGAGAAACCGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3654
DB 3592 TTCCAGAGAAACCGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3651
QY 3655 GACAGCGTGAATTAATCTCTTATGAGAGAAATGAG 3687
DB 3652 GACAGCGTGAATTAATCTCTTATGAGAGAAATGAG 3684

RESULT 3
US-08-961-803-5
Sequence 5, Application US/08961803
Patent No. 6150589
GENERAL INFORMATION:
APPLICANT: Payne, Jewel
APPLICANT: Cummings, David A.
APPLICANT: Cannon, Raymond J.C.
APPLICANT: Narva, Kenneth E.
APPLICANT: Steilman, Steve
TITLE OF INVENTION: No. 6150589 [Bacillus thuringiensis Isolate Denoted
TITLE OF INVENTION: B.c. PS158C2, Active Against Lepidopteran Pests, and Genes
TITLE OF INVENTION: Encoding Lepidopteran-Active Toxins
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jay M. Sanders
STREET: 2421 N.W. 41st Street, Suite A-1
CITY: Gainesville
STATE: Florida
COUNTRY: USA
ZIP: 32606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,803
FILING DATE: 31-OCT-1997
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/069,902
FILING DATE: 01-JUNE-1993
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/759,247
FILING DATE: 13-SEPT-1991
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/448,170
FILING DATE: 23-MAY-1995
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sanders, Jay M.
REGISTRATION NUMBER: 39,355
REFERENCE/DOCKET NUMBER: M/S 102DCD1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (352) 375-8100

TELEFAX: (352) 372-5800
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3684 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-961-803-5

Query Match 88.6%; Score 3266.6; DB 3; Length 3684;
Best Local Similarity 93.4%; Pred. No. 0;
Matches 3449; Conservative 0; Mismatches 229; Indels 15; Gaps 3;

QY 1 TTGACTTCAAATGAGAAAAATGAGAAATGAAATTAATAATGCTTATGATTCAGCTGTA 60
DB 1 TTGACTTCAAATGAGAAAAATGAGAAATGAAATTAATAATGCTTATGATTCAGCTGTA 60
QY 61 TCGAATCATTCACACAAATGAGATCTATCAACAGATGCTGTATGAGATTCCTTGTGT 120
DB 61 TCGAATCATTCACACAAATGAGATCTATCAACAGATGCTGTATGAGATTCCTTGTGT 120
QY 121 ATAGCCGAGGGAATTAATATCAATCCACTTTAGCGCATCAACAGTCCAAACGGGTATT 180
DB 121 ATAGCCGAGGGAATTAATATCAATCCACTTTAGCGCATCAACAGTCCAAACGGGTATT 180
QY 181 AACATAGCTGTGAAATATCTAGGTGATTAAGCGGTACCGTTGTGAGCAAAATAGCTAGT 240
DB 181 AACATAGCTGTGAAATATCTAGGTGATTAAGCGGTACCGTTGTGAGCAAAATAGCTAGT 240
QY 241 TTTTATAGTTTTCTGTGTGATTAATTTGGCCCGCGGAGATCATGTGGGAAATTTTC 300
DB 241 TTTTATAGTTTTCTGTGTGATTAATTTGGCCCGCGGAGATCATGTGGGAAATTTTC 300
QY 301 CTAGAAATGTCGAAACAATTATTAATCAACAAATACAGAAAAATGCTAGAAATCGGCA 360
DB 301 CTAGAAATGTCGAAACAATTATTAATCAACAAATACAGAAAAATGCTAGAAATCGGCT 360
QY 361 CTGTGCTGATTAACAAGGTTTGAAGATTCCTTTAGAGCTTATCAACAGTCACTTGAAGAT 420
DB 361 CTGTGCTGATTAACAAGGTTTGAAGATTCCTTTAGAGCTTATCAACAGTCACTTGAAGAT 420
QY 421 TGGCTAGAAAAACGCTGATGATGCAAGAACAGAAAGTGTCTTTATACCAATATATAGCC 480
DB 421 TGGCTAGAAAAACGCTGATGATGCAAGAACAGAAAGTGTCTTTATACCAATATATAGCC 480
QY 481 TTAGAACTTGATTTTCTTAATGCGATCGCTTTTGCCTTATAGAAACAGAAAGTTCGA 540
DB 481 TTAGAACTTGATTTTCTTAATGCGATCGCTTTTGCCTTATAGAAACAGAAAGTTCGA 540
QY 541 TTATTAATGATATATGCTCAAGCTGCAAAATTTACACCTATTTATTTAGAGATGCTCT 600
DB 541 TTATTAATGATATATGCTCAAGCTGCAAAATTTACACCTATTTATTTAGAGATGCTCT 600
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DB 601 CTTTGTGTAGTGAATTTGGGCTTACATCGCAGAAATTTCAAGCTTATATGAGCCGCA 660
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QY 721 AGCTTGAGAGGACAAATGCGCAAGTGGGTGCTTATATCAATTCGCTAGAGATCTA 780
DB 721 AATTTGAGAGGACAAATGCTGAAAGTTGGTGGATATATCAATTCGCTAGAGATCTTA 780
QY 781 ACGTTAGGGGTATTAATCTATGCTGCACTATTCGCAAGCTATGACATCGCATTTATCCA 840
DB 781 ACGTTAGAGATTAATTAATCTATGCTGCACTATTCGCAAGCTATGACATCGCTTTATCCA 840
QY 841 ATAAATCGAGTGTCTGATTAACAAGGAAAGTTTATACAGCGCAATGGAGCAACGGG 900
DB 841 ATGAATTCAGTGTCTCAATTAACAAGAAATTTATACAGATTCCAATTTGGAGAACAAAT 900

QY 901 GTTAAT-----ATGCAAGTATGAATTTGATATTAATTAATGACACTTGTTCGGCT 954
DB 901 GCACCTTCAGGATTTGCAAGTACGAATGTTAAATTAATGACACATCGTTCGCTCC 960
QY 955 ATAGAGATCGGGTATTCGGAAGCCGCACTACTGATTTTCTAGAACAACTTACAAT 1014
DB 955 ATAGAGATCGGGTATTTAGGCTCCGCACTTACTGATTTTCTAGAACAACTTACAAT 1020
QY 961 ATAGAGCTGCGCTTATTTAGGCTCCGCACTTACTGATTTTCTAGAACAACTTACAAT 1020
DB 961 ATAGAGCTGCGCTTATTTAGGCTCCGCACTTACTGATTTTCTAGAACAACTTACAAT 1020
QY 1015 TTATGACTTCATCAAGATGAGTGTACTAGGCATATGACTTATGCGGGGGGACACA 1074
DB 1021 TTACAGGTATTAATGATGAGATTAATCTCAATATATGAAATTAATGCGGGGACATAGA 1080
QY 1075 ATTCAATCTGCGCAATAGAGCGGATTAATATCTCAACGATGGGTCTACCAATCT 1134
DB 1081 CTTGAATCCCGAACAAATAGGGGGTCTATTAAGTACTGACACACGAAATACCAATCT 1140
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DB 1141 TCTATTAATCTGTATGATTAATCAATCTCTCGAGAGCTTTATAGAACAGATCATTT 1200
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DB 1201 GCAGGATTAATAT-----ACTTAACTACTCTGTGAATGAGATCACTTGGGCTAGA 1254
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DB 1312 TATACTGAGATGGGACACACATTTTGAATTCAGAAATGAAATTTACACAGAAACACA 1371
QY 1375 GAAACAACAATTTATGAATCATATAGTCAATAGTTATCTCAATAGAGCTCATTTCAAA 1434
DB 1372 GAACGACCAAAATATATGAATCTTACAGTCAATATATCTAATTAAGACCTAATATCAGGA 1431
QY 1435 TCTAGGATGATATACCATATATTTCTTGAAGCACACCTGATGCAATATGCC 1494
DB 1432 AACACTTTGAGACACACATATATTTCTGAGCGCACCGTATGACATGTAACAAATACC 1491
QY 1495 ATTAGTTGATATGATTAACAACAATATACCATTTGATTAATCATTTAATTCAGGT 1554
DB 1492 ATTAGTTGATATGATTAACAACAATATCAATTTGATTAATCATTTAATTCAGGT 1551
QY 1555 ACCTCTGATGATGAGTGGCCAGGATTTTACAGAGGGGATATATTCGAACTAAT 1614
DB 1552 ACCTCTGATGATGAGTGGCCAGGATTTTACAGAGGGGATATATTCGAACTAAT 1611
QY 1615 GGTATGATATATATATGAGTCTTAATTTTAAATATATCATTTACAGCGGTATCGCGTG 1674
DB 1612 GGTATGATATATATATGAGTCTTAATTTTAAATATATCATTTACAGCGGTATCGCGTG 1671
QY 1675 AGAGTTCGTTATGCTGCTCTCAACAATGCTCTGAGGGTAACTGCGAGGGGAGTACT 1734
DB 1672 AGAGTTCGTTATGCTGCTCTCTCAACAATGCTCTGAGGGTAACTGCGAGGGGAGTACT 1731
QY 1735 ACTTTGATCAAGGATTTCCCTAGTACTATGATGCAAGTCAATCTTGAATCTCAATCA 1794
DB 1732 ACTTTGATCAAGGATTTCCCTAGTACTATGATGCAAGTCAATCTTGAATCTCAATCA 1791
QY 1795 TTTAATTTGCAAGATTTCTGTAGTATTAATGATCTGCGAGTCAAACTGCTGGAATA 1854
DB 1792 TTTAATTTGCAAGATTTCTGTAGTATTAATGATCTGCGAGTCAAACTGCTGGAATA 1851
QY 1855 AGTATTAAGTAATTAATGAGGTGACAAAGTTTCACTTGAATTAATTAATTAATCAATCCA 1914
DB 1852 AGTATTAAGTAATTAATGAGGTGACAAAGTTTCACTTGAATTAATTAATTAATTAATCCA 1911
QY 1915 ATTAGTCAACCTTCCAGAGCAAGATGATTTAAGAAAGGCGCAGAGCGGCTGAATGCT 1974
DB 1912 ATTAGTCAACCTTCCAGAGCAAGATGATTTAAGAAAGGCGCAGAGCGGCTGAATGCT 1971

QY 1975 CTGTTTCTAATAGCAATCCAGAAAGATTGAAAACAATGTGACAGATTATCATTTGAT 2034
DB 1972 CTGTTTCTAATAGCAATCCAGAAAGATTGAAAACAATGTGACAGATTATCATTTGAT 2031
QY 2035 CAAGTATCAATTTAGTGGCGTGTATTCGGATGAATTTCTGCTTAGATGAAAGAGAA 2094
DB 2032 GAAGTATCAATTTAGTGGCGTGTATTCGGATGAATTTCTGCTTAGATGAAAGAGAA 2091
QY 2095 TTACTTGAGAAAGTGAATATGCGAAACGACTCAGTATGAAAGAACTTACTCCAAAT 2154
DB 2092 TTACTTGAGAAAGTGAATATGCGAAACGACTCAGTATGAAAGAACTTACTCCAAAT 2151
QY 2155 CCAAACTTCACATTCACATTAAGCAACGACTTCATCTACTTAATGCAATTCGAAT 2214
DB 2152 CCAAACTTCACATTCACATTAAGCAACGACTTCATCTACTTAATGCAATTCGAAT 2211
QY 2215 TTCAACATCTATCCATGAAACATCGAATGATGGGAGAGTGAACATTAACAATC 2274
DB 2212 TTCAACATCTATCCATGAAACATCGAATGATGGGAGAGTGAACATTAACAATC 2271
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QY 2335 TGTATTCGACGTATTTATATCAAAAAATGAGAGTCCGAATTTAAAGCTTATCTGC 2394
DB 2332 TGTATTCGACGTATTTATATCAAAAAATGAGAGTCCGAATTTAAAGCTTATCTGC 2391
QY 2395 TACCAATTAAGAGGTATATTTGAAGATGATCAAGATTTAGATATTTGATTCGTAT 2454
DB 2392 TACCAATTAAGAGGTATATTTGAAGATGATCAAGATTTAGATATTTGATTCGTAT 2451
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DB 2452 AATGCGAAACATGAAACATTTGATGTTCCAGGTACCGAGTCCGATGGCGCTTTCAGTT 2511
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DB 2512 GAAAGCCCAATCGGAGGTCCGAGAACCGAATGATGCGCACCACTTTTGAATGGAAT 2571
QY 2575 CCGATCTAGATGTTCTGCGAGAGTGAAGAAATGTCGCACTTCCTCCATCATTTTC 2634
DB 2572 CCGATCTAGATGTTCTGCGAGAGTGAAGAAATGTCGCACTTCCTCCATCATTTTC 2631
QY 2635 TCTTGGATATTTATTTGATGATGACAGACTTGATGAGATCTAGCGGTGGGTGTA 2694
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DB 2752 AAACCAATTAAGAGAGAGACGCTCTCGGTGTAAGAGACACAGAAATGAGAGAC 2811
QY 2815 AAACGTAAGAACTCAATTTGAAACAAACGAGTATATCAAGAGCAAAAGAGCTGTG 2874
DB 2812 AAACGTAAGAACTCAATTTGAAACAAACGAGTATATCAAGAGCAAAAGAGCTGTG 2871
QY 2875 GATGCTTATTTGATGATTTCTCAATATATATGATTAACAGCGGATCAAACTTTGGCATG 2934
DB 2872 GATGCTTATTTGATGATTTCTCAATATATGATTAACAGCGGATCAAACTTTGGCATG 2931
QY 2935 ATTCAGTCCGCAATTAACCTTTGTCATTCGAAATTCGAGAGCTTATCTGTCAAGATTTCT 2994
DB 2932 ATTCAGTCCGCAATTAACCTTTGTCATTCGAAATTCGAGAGCTTATCTGTCAAGATTTCT 2991
QY 2995 GTTATCCCGGTGTAATGCGGAAATTTTGAAGATTTAGAGGTGCGATTTATCACTGCA 3054
DB 2992 GTTATCCCGGTGTAATGCGGAAATTTTGAAGATTTAGAGGTGCGATTTATCACTGCA 3051
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DB 3052 ATCTCCCTATAGATGCGAGAAATGTCGTTAAAAATGTGATTTTAAATGATTAAGCA 3111
QY 3115 TGCTGAATGTAAAAAGGCGATGTGATGTACAACAGAGCCATCAGCTTCTGCTTGT 3174
DB 3112 TGCTGAATGTAAAAAGGCGATGTGATGTACAACAGAGCCATCAGCTTCTGCTTGT 3171
QY 3175 ATCCAGAAATGGGAAGCAAGAGTGTCAACAGAGTTGCGTCTGTCCGGGCGGTGCTAT 3234
DB 3172 ATCCAGAAATGGGAAGCAAGAGTGTCAACAGAGTTGCGTCTGTCCGGGCGGTGCTAT 3231
QY 3235 ATCTCCGTGTCAACAGGTATCAAAAGAGGATTTGAGAGGTTGTGTAAGATTCATGAA 3294
DB 3232 ATCTCCGTGTCAACAGGTATCAAAAGAGGATTTGAGAGGTTGTGTAAGATTCATGAA 3291
QY 3295 ATCCAGAAATGTCAAGAGCACTTAAATTTAAAACTGTGAAGAGAGAGTATCCA 3354
DB 3292 ATCCAGAAATGTCAAGAGCACTTAAATTTAAAACTGTGAAGAGAGAGTATCCA 3351
QY 3355 ACCGATACAGAAACGTGTAATGATTTATATCTGCAACCAAGGTACAGCATATGTAATCC 3414
DB 3352 ACCGATACAGAAACGTGTAATGATTTATATCTGCAACCAAGGTACAGCATATGTAATCC 3411
QY 3415 CGTATGCTGTGATTTGAGATGCAATGAAAGTTGATCTACAGCATCTGTTAATTAACA 3474
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QY 3475 CCGACTTATGAAGAAAGATGATATGATGATGTAAGAGATATCATCTGTAATGAGAC 3534
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QY 3535 AGAGGTATGTGATTAATCCACCACTACAGCTGTTATATGAACAAAGAAATTAAGATAC 3594
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QY 3595 TTCCCAAGAAACCGATTAAGATGATGATGATTTGAGAGAAACGAGGAAATTTATGTA 3654
DB 3592 TTCCCAAGAAACCGATTAAGATGATGATGATTTGAGAGAAACGAGGAAATTTATGTA 3651
QY 3655 GACAGGCTGAATTAATCTCTTATGAGAGATAG 3687
DB 3652 GACAGGCTGAATTAATCTCTTATGAGAGATAG 3684

RESULT 4

US-09-661-322A-62
; Sequence 62, Application US/09661322A
; Patent No. 6593293
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
; APPLICANT: Chu, Chih-Rei
; APPLICANT: Donovan, William P.
; APPLICANT: Gilmer, Amy J.
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin Compos,
; FILE REFERENCE: MECO201
; CURRENT APPLICATION NUMBER: US/09/661,322A
; CURRENT FILING DATE: 2000-09-13
; NUMBER OF SEQ ID NOS: 63
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 62
; LENGTH: 3684
; TYPE: DNA
; ORGANISM: Bacillus thuringiensis
US-09-661-322A-62

Query Match 88.4%; Score 3260.2; DB 4; Length 3684;
Best Local Similarity 93.3%; Pred. No. 0;
Matches 3445; Conservative 0; Mismatches 233; Indels 15; Gaps 3;
QY 1 TTGACTTCAATATGAGAAATGGAATGAATTAATATGCTTTATGATTCAGCTGTA 60
|||||

Db 1 TTGACTTCAAAATGAAAAATGAAATGAAATTAATAATTCCTTATGATTCAGACTGTA 60
Qy TCGAATCATTCACACAAATGATCTATACAGAGATGCTGTAATGAGATTCCTTGTGT 120
Db TCGAATCATTCACACAAATGATCTATACAGAGATGCTGTAATGAGATTCCTTGTGT 120
Qy ATAGCCGAGGGGAAATTAATCAATCCATCTGTTAGCCGATCAACAGTCCAAACGGGTATT 180
Db ATAGCCGAGGGGAAATTAATCAATCCATCTGTTAGCCGATCAACAGTCCAAACGGGTATT 180
Qy AATATGCTGCTGTAATCTAGAGGTATTAAGGGGTACGTTGCTGGAACAAATAGCTAGT 240
Db AATATGCTGCTGTAATCTAGAGGTATTAAGGGGTACGTTGCTGGAACAAATAGCTAGT 240
Qy TTTTATAGTTTTCTGTGTGTAATTAAGCCCGCGCGAGAGATCAGTGGGAAATTTTC 300
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Qy CTAGAACATGTCGAACATCTTATAGCAACAAATTAACAGAAAATGCTAGGAATAGGCA 360
Db CTAGAACATGTCGAACATCTTATAGCAACAAATTAACAGAAAATGCTAGGATAGCGCT 360
Qy CTGAGCTGATTAACAGGTTTAGAGATTCCTTTAGAGCCTATCAACAGTCACTTGAAGAT 420
Db CTGAGCTGATTAACAGGTTTAGAGATTCCTTTAGAGCCTATCAACAGTCACTTGAAGAT 420
Qy TGCTAGAAAAACGCTGATGATGAGAAACAGAAAGTGTCTTTATACCAATATATAGCC 480
Db TGCTAGAAAAACGCTGATGATGAGAAACAGAAAGTGTCTTTATACCAATATATAGCC 480
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Db TTGGAATCTGATTTCTTAATGCGATGCGCTTTTGCGAATTAGAAACGAAGTTCCA 540
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Db TTTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATTAATTAATGAGATGCTCT 600
Qy CTTTGTGTGATGAAATTTGGGCTTACATCCGAGAAAATTCAGTTATTAAGACGCGCA 660
Db CTTTGTGTGATGAAATTTGGGCTTACATCCGAGAAAATTCAGTTATTAAGACGCGCA 660
Qy GTGGAAACAAACGAGAGATTATTCGACTATTTGCGTAGAATGRTAATACAGTCTAAT 720
Db GTGGAAACAAACGAGAGATTATTCGACTATTTGCGTAGAATGRTAATACAGTCTAAT 720
Qy AGCTGAGAGGCAAAATGCGCAAGTTGGGTGCTTATATATCAATTCGTTAGAGATCTA 780
Db AATTTGAGAGGCAAAATGCTGAAAGTTGGTTCGATATATCAATTCGTTAGAGATCTA 780
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Qy GTAAAT-----ATGCAAGTATGAATTTGGATTAATAATATGCACTTGTTGCTTCCGCT 954
Db GTAAAT-----ATGCAAGTATGAATTTGGATTAATAATATGCACTTGTTGCTTCCGCT 954
Qy ATAGAGACTGCGTTATCCGAGCCGCACTCTATGATTTTCTAGAACAACTTACAAAT 1014
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Db ATAGAGCTGCGTTATTAAGCCCTCGCATCTATGATTTTCCAGAACAGCTTACAAAT 1020
Qy TTTAGCACTTCATCAGATGAGTGTCTACTAGGCATATGACTTATCTGGCGGGGACACA 1074
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Qy ATTCAATCTGCGCAATAGAGAGCGGATTAATCTCAACGCACTGGGTCTACCAATCT 1134
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Db TCTATTAATCTGTAAGATTAATCAATCTTCTCTGAGACGTATATTTGACTGTAATCATAT 1141
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Db GAGAGAGTCTCTATAGGGGAATTTTACCTTGAACCAATCTCAAGTGTCTCTACTGTATGA 1201
Qy TTTAATTTTAGAACCTCGTAGAATCTTTTGAAGAGTACTGCTAATATAGTCAACCC 1255
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Db TATAGTCACTGCGCTTCAATTAATAAGTTCAAGAACTGAAATTTACCAACAGAACACA 1312
Qy GAAACGCAAAATTAATGAATCATATGCTCATAGGTTATCTCACTAGGGCTCATTTGACA 1375
Db GAAACGCAAAATTAATGAATCATATGCTCATAGGTTATCTCACTAGGGCTCATTTGACA 1372
Qy TCTAGGGTCAATGATACAGATATTTCTTGGAGCAACCGTAGTGCAATGTCMAATACC 1435
Db TCTAGGGTCAATGATACAGATATTTCTTGGAGCAACCGTAGTGCAATGTCMAATACC 1432
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Db ACTTTGATCAAGGATTCCTCTGATCTATAGAGTCAATAGAGTCTTGAATCATCAATCA 1732
Qy TTTAGATTTGCAAAATTTCTGTAGGTATTAAGTATTAAGTATTAAGTATTAAGTATTAAGT 1795
Db TTTAGATTTGCAAAATTTCTGTAGGTATTAAGTATTAAGTATTAAGTATTAAGTATTAAGT 1792
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Db AGTATAGTATATATGCAAGGTATGCAAAAGTTCACCTTGAATTAATTAATTAATTAATCA 1852
Qy ATTACTGCAACCTTGAAGAGATGCAATTTAGAAAGGGCGAGAGGGGGGTGAATGCT 1915
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Qy CTGTTTATTAATCAAGATTCGAGATGCAATTTAGAAAGGGCGAGAGGGGGGTGAATGCT 1975
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Qy TTAATGAGAGAGTGAATTAATGCGAAACGACTCAGATGAGAAAGAACTTACTCAAGAT 2155
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DB 2272 CAGGAAGGAATGACGATTTTAAAGAAATTACGTCACATCCGGGGACCTTTAATGAG 2331
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DB 2512 GAAAGCCCAATCGGAAGGTGCGAGAACCGAATGATGCGCACCAATTTGAATGGAAT 2571
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DB 2752 AAACCATTTATGAGAAAGCATCTGCTGCTGTAAGAGACAGAAATAATGAGAGAC 2811
QY 2815 AAACGTAATACTAATTTGAAACAAACGATATATCAAGGCGAAATAAGAGCTGTG 2874
DB 2812 AAACGTAATACTAATTTGAAACAAACGATATATCAAGGCGAAATAAGAGCTGTG 2871
QY 2875 GATGCTTATTTGATGATTTCTCATATATATGATTAACAACGATCAAAATTGGCATG 2934
DB 2872 GATGCTTATTTGATGATTTCTCATATATGATTAACAACGATCAAAATTGGCATG 2931
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QY 3235 ATCTCCGCTGTCACAGGTCACAAAGAGATGATGAGAGGTTGTTAAAGATCAATGAA 3294
DB 3232 ATCTCCGCTGTCACAGGTCACAAAGAGATGATGAGAGGTTGTTAAAGATCAATGAA 3291
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DB 3392 ATGAGAAACAATA CAGACGAATTAATTTAAAACTGTGAAGAGAGAGTGTATCCA 3351
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QY 3415 CGTAATCTGATATGAGAGATGATGATGATGATGATGATGATGATGATGATGATGAT 3474
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QY 3475 CCGACTTATGAAGAAAGGATGATGATGATGATGATGATGATGATGATGATGATGAT 3534
DB 3472 CCGACTTATGAAGAAAGGATGATGATGATGATGATGATGATGATGATGATGATGAT 3531
QY 3535 AGAGGATGATGATGATTTTCCACCACTACGCTGTTATATGACAAAGATTTGAATAC 3594
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DB 3652 GACAGCTGGAATTTACTCTTATGAGAGATGAG 3684

RESULT 5
US-08-377-690-1
Sequence 1, Application US/08377690
Patent No. 5628995
GENERAL INFORMATION:
APPLICANT: PEPPERON, Marlinx
APPLICANT: JANSSENS, Stefan
APPLICANT: DENOLF, Peter
TITLE OF INVENTION: CONTROL OF OSTRININ A
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSER: Burns, Doane, Swecker & Mathis
STREET: The George Mason Bldg., Washington & Prince
STREET: Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 2213-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/377,690
FILING DATE:
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/164,781
FILING DATE:
APPLICATION NUMBER: US 07/938,362
FILING DATE: 31-AUG-1992
ATTORNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon B
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 010830-039
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEO ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 4074 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear

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MOLECULE TYPE: DNA (genomic)
ORIGINAL SOURCE:
ORGANISM: Bacillus thuringiensis
STRAIN: entomocidus HD 110
FEATURE:
NAME/KEY: CDS
LOCATION: 186..3872
OTHER INFORMATION: /note= "PROPERTIES: CryIb is toxic to
OTHER INFORMATION: Ostrinia nubilalis (among others)"
US-08-377-690-1

Query Match      85.0%; Score 3133.6; DB 1: Length 4074;
Best Local Similarity 91.1%; Pred. No. 0;
Matches 3373; Conservative 0; Mismatches 299; Indels 30; Gaps 3;

QY 1 TTGACTTCAAAATGGAATAATGAAATGAAATTTATTAATGCTTATTCAGTACGCTGT 60
DB 186 TTGACTTCAAAATGGAATAATGAAATGAAATTTATTAATGCTTATTCAGTACGCTGT 230
QY 61 TCGAATCATTCACACAAATGATCTATCCACAGATGCTGTATGTAGAGATTCCTTGTGT 120
DB 231 TCGAATCATTCACACAAATGATCTATTCACAGATGCTGTATGTAGAGATTCCTTGTGT 290
QY 121 ATGCGGAGGGGAATATATCAATCCACTGTTAGGCGATCAACAGTCCAAAGGGTATT 180
DB 291 ATGCGGAGGGGAATATATCAATCCACTGTTAGGCGATCAACAGTCCAAAGGGTATT 350
QY 181 AACATGCTGGTGAATACATAGGTGTATAGGCGTACCGTTGCTGACAAATAGCTAGT 240
DB 351 AACATGCTGGTGAATACATAGGTGTATAGGCGTACCGTTGCTGACAAATAGCTAGT 410
QY 241 TTTTATAGTTTTCTTGTGTGTAATTATGCCCCCGCGGAGAGATCAGTGGAAATTTTC 300
DB 411 TTTTATAGTTTTCTTGTGTGTAATTATGCCCCCGCGGAGAGATCAGTGGAAATTTTC 470
QY 301 CTGAACATGTGGAACAACCTTAATAACAATAATACAAATAATGTAGAAATAGCGCA 360
DB 471 CTGAACATGTGGAACAACCTTAATAACAATAATACAAATAATGTAGAAATAGCGCT 530
QY 361 CTGCTCGATTAACAAGGTTTAGAGATTCCTTTAGAGCTATCAACAGTCACTTGAAGAT 420
DB 531 CTGCTCGATTAACAAGGTTTAGAGATTCCTTTAGAGCTATCAACAGTCACTTGAAGAT 590
QY 421 TGGCTAGAAAACCGTATGATGCAAGAGAGAAAGTGTCTTTATACCAATATATAGCC 480
DB 591 TGGCTAGAAAACCGTATGATGCAAGAGAGAAAGTGTCTTTATACCAATATATAGCT 650
QY 481 TTGAACCTTGATTTCTTAATGCGATGCCCTTTGGCAATTGAACCAAGAAATTCCA 540
DB 651 TTGAACCTTGATTTCTTAATGCGATGCCCTTTGGCAATTGAACCAAGAAATTCCA 710
QY 541 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATTTATTTAGAGATGCTCT 600
DB 711 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATTTATTTAGAGATGCTCT 770
QY 601 CTTTTTGTAGTGAATTTGGGCTTACATGCGAAGAAATTCACGTTATTTAGAGCGCAA 660
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QY 661 GTGGAACAACGAGATTTATCCGACTATTTGGCTAATATGTATTAATACAGGTCTAAT 720
DB 831 GTGGAACAACGAGATTTATCCGACTATTTGGCTAATATGTATTAATACAGGTCTAAT 890
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DB 891 AGCTTAGAGAGGCAAAATGCGCAAGTTGGGTGCTATATATCAATCCGTAGAGATCTA 950
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DB 951 ACGTTAGAGGATATAGTCTAGTGGCACTATTCGCAAGCTATGACACTGCGACTATCCA 1010
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DB 1071 GTAAATATGCAAGATATGATATGTAATAATATATGACCTTGTCTCCGTATAGAG 1130
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DB 1131 ACTGGGTTATCCGAAGCCCGCATCTACTTGAATTTCTTGAAACAATTTTATAG 1190
QY 1021 ACTTCATCAGATGAGTGTCTACTAGGATATGATCTTACGCGGGGGGACAAATTTCA 1080
DB 1191 GCTTATTCAGATGAGTATATCTAGGATATGATCTTATTTGGGGGGGACAAATTTCA 1250
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DB 1251 TCTCGGCCAATGAGAGCGGATTAATATCTCAACGATGGGGCTACCAATCTTATTT 1310
QY 1141 AATCTGTAAATATATCTTCTCTGAGACGTATATTTGATGTAATCATATGCAAGA 1200
DB 1311 AATCTGTAAATATATCTTCTCTGAGACGTATATTTAGGACTGAATCATATGCAAGA 1370
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DB 1371 GTGCTCTATGGGGAATTTACCTTGAACTTATCATATGATGCTCTAGTATTAAT 1430
QY 1261 TTTAGGAACCTCAGATATCTTTGAAAGAGTACTGCTAATATATGCAACCTATAG 1320
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DB 1551 CCAATTAATGAAATCATATATGCTATATCTCATATAGGCTCATTTTCAATCTAG 1610
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DB 1611 GTGAGTGAACAAGATATTTCTTGAGACGACCGTATGTCAGATGTAACAATATCAT 1670
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DB 1731 GTAGTCAGTGGCCCAAGATTTTACAGAGGGGATATATATCACTAATATCAGTGTG 1790
QY 1621 GTATCAAGTATGGGTCTTAATTTTAATAATATCAATCAACGCGTATGCGTGAAGTT 1680
DB 1791 GTATCAAGTATGGGTCTTAATTTTAATAATATCAATCAACGCGTATGCGTGAAGTT 1850
QY 1681 CGTTATGCTGCTTCTCAACAATGCTCGAGGTTAACTGTGAGAGGATCACTATCTTT 1740
DB 1851 CGTTATGCTGCTTCTCAACAATGCTCGAGGTTAACTGTGAGAGGATCACTATCTTT 1910
QY 1741 GATCAAGATTTCCCTAGTACTATGAGTGAACAATGAGTCTTTTGAATCTCATCATTTAGA 1800
DB 1911 AATTTTATGATCTTACGTATCAATGAAACAGTGAAGAGAACTAATAATTCGAAATTTT 1970
QY 1801 TTTGCAAAATTTCTGTAGGATTTAGTGATCTGGAGTCAAA--ACTGCTGAATATAGT 1857
DB 1971 AGAGGTGCTTTTATCTACACTTTTATCTTTTATCAAAATTTCAAGATATATTTCAAGCTCT 2030
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DB 2031 ATTCAAGGCTTATAGTGAATATGGAAGTGTATATATGATTAATTTGAATTTATTCAGT 2090
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QY 1978 TTTACTAATACGAATCCAGAAAGTTGAAAACAGATGTGACAGATTATCATATTGATCGA 2037
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QY 2038 GTATCCAAATTTAGGGGGTGTATTCGGATGAATCTCGCTTAGATGAAAAGAGAAATTA 2097
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DB 2451 GAAGAAATGACGTAATTTAAAGAAATTAAGTCACTACCGGGGACTTTTAAATGAGTGT 2510
QY 2338 TATCCGACGTAATTTATCAAAAATATGAGAGTCCGAAATTAAGCTTATCTCGCTAC 2397
DB 2511 TATCCGACGTAATTTATCAAAAATATGAGAGTCCGAAATTAAGCTTATCTCGCTAC 2570
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QY 3238 CTCCTGTCAACGCGTCAAAAGAGGATATGAGAGGCTGTGTAAACATCATGAATTC 3297
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QY 3298 GAGAACAAATCAGACGAACTTAAATTTAAACCTGTGAAGAGAGAGTATCCAAACG 3357
DB 3471 GAGAACAAATCAGACGAACTTAAATTTAAACCTGTGAAGAGAGAGTATCCAAACG 3530
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DB 3591 TGTATTCCTCGTAATGCTGTGATATGAGATGATGATGATGATGATGATGATGATGATGAT 3650
QY 3466 AATTACAAACCGACTTAAAGAAAGAAACGTAATCAATGTAAGAAAGATTAACATTCGT 3525
DB 3651 AATTACAAACCGACTTAAAGAAAGAAACGTAATCAATGTAAGAAAGATTAACATTCGT 3710
QY 3526 GAATATGACAGAGGATGATGATTAATTCACCACTACAGCTGTTATTAAGCAAAAGAA 3585
DB 3711 GAATATGACAGAGGATGATGATTAATTCACCACTACAGCTGTTATTAAGCAAAAGAA 3770
QY 3586 TTGAATACTTCCCAAGAACCGATTAAGATGATGATGATGATGATGATGATGATGATGAT 3645
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RESULT 6
US-08-100-709-3
; Sequence 3, Application US/08100709
; Patent No. 5322687
; GENERAL INFORMATION:
; APPLICANT: Donovan, William P.
; APPLICANT: Tan, Yiping
; APPLICANT: Jany, Christine S.
; TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYPT4 AND CRYPT5
; TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Panitch Schwarze Jacobs & Nadel c/o A.S.
; ADDRESSEE: Nadel
; STREET: 1601 Market Street, 36th Floor
; CITY: Philadelphia
; STATE: Pennsylvania
; COUNTRY: U.S.A.
; ZIP: 19103
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/100,709
; FILING DATE: 1993/07/29

CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Egolf, Christopher
REGISTRATION NUMBER: 27633
REFERENCE/DOCKET NUMBER: 7205-49
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-757-1590
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 3934 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: circular
MOLECULE TYPE: DNA (genomic)
FEATURE:
NAME/KEY: CDS
LOCATION: 67..3756
FEATURE:
NAME/KEY: misc_feature
LOCATION: 2253..2272
US-08-100-709-3

Query Match 72.9%; Score 2687.2; DB 1; Length 3934;
Best Local Similarity 83.5%; Pred. No. 0;
Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;

QY 1 TTGACTTCAATAGAAAAATGAAATGAATTAATAATCTTATTCGATTCAGCTGTA 60
DB TTGACTTCAATAGAAAAATGAAATGAATTAATAATCTTATTCGATTCAGCTGTA 126
QY 61 TCGAATCATTCACACAAATGATCTATCACGATGCTGTAATGAGATTCTTGTGT 120
DB TCGAATCATTCACACGCAATGAAATCTATCACGATGCTGTAATGAGATTCTTGTGT 186
QY 121 ATAGCGAGGGGAAATATATCAATCCACTTTAGGCGATCAACAGTCCAAAGGGATT 180
DB ATAGCGAGGGGAAATATATCAATCCACTTTAGGCGATCAACAGTCCAAAGGGATT 246
QY 187 GTAGCGAGGGGAAATATATCAATCCACTTTAGGCGATCAACAGTCCAAAGGGATT 246
QY 181 AACATAGCTGTAGAAATCTAGTGTATAGGCGATCAACAGTCCAAATAGCTAGT 240
DB AACATAGCTGTAGAAATCTAGTGTATAGGCGATCAACAGTCCAAATAGCTAGT 306
QY 241 TTTTATAGTTTTCTTGTGTGTAATTATGCCCCCGCGAGATCATGTGGAAATTTTC 300
DB TTTTATAGTTTTCTTGTGTGGAATATATGCGCTAGTGGCAAGATCCATGGAAATTTTC 366
QY 301 CTGAACATGTGCAACAACTTATTAATCAACAAATACAGAAATGCTAGAAATAGGCA 360
DB CTGAACATGTGCAACAACTTATTAATCAACAAATACAGAAATGCTAGAAATAGGCA 426
QY 361 CTGCTCGATTACAAAGGTTTGAAGATCTCTTAGAGCTTACACAGTCACTTGAAGAT 420
DB ATTGCTCGATTACAAAGGTTTGAAGATCTCTTAGAGCTTACACAGGCTCTTGAAGAT 486
QY 421 TGGCTAGAAAACGCTGATGATGCAAGACGAAAGTGTCTTTATACCAATATATAGCC 480
DB TGGTATGATTAACCGAAATGATGCAAGATCAAGACATTAATCTTGAGCCCTATGTTGCT 546
QY 481 TTGAACCTTGATTTTCTTAATGAGATGCGCTTTTGCATTTAGAAACAAAGATTTCA 540
DB TTGAACCTTGATTTTCTTAATGAGATGCGCTTTTGCATTTAGAAATGAAAGATTTCA 606
QY 541 TTATTAATGATATATGCTCAAGCTGCAAAATTTACCTATTAATTAATGAGATGCTCT 600
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QY 601 CTTTGTGTATGATTTGGGCTTAATCGCAGAAATTTCAAGCTTATTAATGAGCCCAA 660
DB CTTTGTGTATGATTTGGGCTTAATCGCAGATCTTCAACATTTTACCAAGAACAA 726
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QY 781 AGCTTGAAGGGTATTAATGATCTAGTGAATCTATTCGCAAGGATATGACATCTTATCCA 840
DB AGCTTGAAGGGTATTAATGATTAATGATGCTTATTCGCAAGGATATGATCTGCACTTATCCA 906
QY 841 ATTAATACGAGTCTCAGTTAAACAAAGGAATTTATACAGCGCAATTTGAGCAACAGG 900
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QY 955 ATGAGACTGCGGTTATCCGAAGCCGCAATCTAGTTTCTTATAGAACATTTCAAT 1014
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DB AGATTTAATTTTGAACCTCAGAAATCTTGAAGAGGCGCCACTTCAAGTCA 1380
QY 1321 CCTATGATGACCTGCGGCTTCAATTAATAAGATTGCAAACTGAATTTACACAGAAACA 1371
DB CCTATGATGAGTGTCTTATGAGGGAAATTAATCTTGAACCTATTCAGTGTCTCTACTGTT 1440
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DB GGAACACTTGTGAGACACAGTCTATCTTGAAGCGATGCTATGTGCAATCTGTA 1560
QY 1492 ACCATAGTTGATGATGATTAACAAATACATGCTGTAATAATCATTTCACTTAATTTCA 1551
DB ACCATAGTTGATGATGATTAACAAATACATGCTGTAATAATCATTTCACTTAATTTCA 1620
QY 1552 GGTACCTCTGTAGTCAAGTGGCCAGAGATTTACAGAGGGGATTAATCCGAACTAACGTT 1611
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QY 1612 AATGTATGTACTAATGATGAGTCTTAATTTTAATTAATCATCTTACAGCGGTATCGC 1671
DB AATGTATGTACTAATGATGAGTCTTAATTTTAATTAATCATCTTACAGCGGTATCGC 1740
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DB GTGAGAGTCTGTATGCTGCTTCAAAACATGCTCTGAGGGTAACTGTGCGAGGGAGT 1800
QY 1741 GTAGAGATTCGTATGCTTCTTACTACAGATTTACAAATTTTTCACGGAATTAATGGAACC 1800
DB ACTACTTTTGATCAAGATATCTCTTACTATGATAGTCAAGATGCTTTTGAACATCTCA 1791
QY 1732 ACTACTTTTGATCAAGATATCTCTTACTATGATAGTCAAGATGCTTTTGAACATCTCA 1791
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QY 1792 TCATTAGATTGCGAATTTCCGTAGATTTAGTGCATCTGCGACTCAACCTGCGA 1851
DB 1861 AGTTTGAACCTCAGAGATTAGTACTCCCTTTAAATTTTAAATGCCCCAAGCAATTC 1920
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DB 1921 ACATTGGGTGCTCAGACTTTTCAATCAGAAAGTTTATATAGATAGATCGAATTTGTT 1980
QY 1912 CCAATTAAGTCAACCTTGAAGCAATGATTTAGAAAAGGCGCAAGGCGGTGAT 1971
DB 1981 CCAGCAGAGGTATCATTTGAGGCGAATATGATTTAGAAAGACAAAGGCGGTGAT 2040
QY 1972 GCTCTGTTTATCTAATAGCAATCCAGAAAGTTGAAAAGATGTGACAGATTTATCATATT 2031
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QY 2032 GATCAAGTATCAATTTAGTGGCGGTGTTTATCCGATGAATTTGCTTATGTAAGAAAGAG 2091
DB 2101 GACCAAGTGCATATATGTCGATGTTTATCAGATGAATTTTGTGATGAGAACGA 2160
QY 2092 GAATTAATTGAGAAAGTGAATATGCGAAAGCACTCAGTATGAAAGAACTTATCTCAA 2151
DB 2161 GAATTAATTGAGAAAGTGAATATGCGAAAGCACTCAGTATGAAAGAACTTATCTCAA 2220
QY 2152 GATCCAACTTCACTCAGTATGAGCAACGACTTCAATCTAATGAGCAATCG 2211
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QY 2212 AATTTCATCTATCCATGAAATGCAATGCAATGATGTTGGGGAAGTGAACATTTACA 2271
DB 2281 AACTTCCCTCTATTAATGAGCTATGAAATGATGATGTTGGGGAAGTGAACATTTACC 2340
QY 2272 ATCCAGAAAGAAATGACGTATTTAAAGAAATTAAGTCACTACCGGAGCTTTTAA 2331
DB 2341 ATCCAGAAAGAAATGACGTATTTAAAGAAATTAAGTCACTACCGGAGCTTTTAA 2400
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QY 2392 CGCTACCAATTAAGAGGTATTTGAAGATGCAAGATTTAGATATTTGATTCGT 2451
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QY 2632 TTCTCTTGGATTTATGATTTGGATGCAACAGATTTGATGATCTAGGCTGTGGGTG 2691
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QY 2692 GATTTCAAGATTAAGACGAGAAAGTCTATGCAAGCTAGGGAATCTGAAATTTATGAA 2751
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QY 2752 GAGAAACCATTAATTAAGAAAGCACTGCTGCTGTAAGAGACAGAAATGAGAA 2811
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QY 2812 GACAAACGTAAGAAATCAATATGGAACAAACAGATATATCAGAGCGAAAGAGCT 2871
DB 2881 GACAAACGTAAGAAATCAATATGGAACAAACAGATATATCAGAGCGAAAGAGCT 2940
QY 2872 GTGGATGCTTTATTTGATTTCTCAATATATATGATTAACAGCGAATCAAACTTTGGC 2931

DB 2941 GTGGATGCTTTATTTCTGATATTTCTCAATATGATCAATTAACAGCGAATCAAACTTTGGC 3000
QY 2932 ATGATTCATGCGCAGATTAATCTGTCATGCAATTCGAGAGGCTTATCTGTCAGAAATTA 2991
DB 3001 ATGATTCATGCGCAGATTAATCTGTCATGCAATTCGAGAGGCTTATCTGTCAGAAATTA 3060
QY 2992 TCTGTTATCCCGGGGTGTAATGCGGAAATTTTGAAGAAATTAAGAGTGCATTAATCACT 3051
DB 3061 CTTGTTATCCAGGTGTAATGCGGAAATTTTGAAGAAATTAAGAGTGCATTAATCACT 3120
QY 3052 GCATCTCCCTATATGCAATGCGAAGATGCTGTTAAAAATGCTGATTTATATATGATTA 3111
DB 3121 GCATCTCCCTATATGCAATGCGAAGATGCTGTTAAAAATGCTGATTTATATATGATTA 3180
QY 3112 GCATCTCCCTATATGCAATGCGAAGATGCTGTTAAAAATGCTGATTTATATATGATTA 3171
DB 3181 ACATGTTGGAATGTAAGAGGCAATGATGATGATGATGATGATGATGATGATGATGATGAT 3240
QY 3172 GTTATCCAGAAATGCGAAGAGATGCTCAAAAGCACTTCCGCTGCTGCGGGCGTGGC 3231
DB 3241 GTTATCCAGAAATGCGAAGAGATGCTCAAAAGCACTTCCGCTGCTGCGGGCGTGGC 3300
QY 3232 TATATCTCCGCTGTCACAGGCTACAAAGAGGATGGAAGGCTTGTATGATCAT 3291
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QY 3292 GAATGCGAAGCAATCAGAGCACTTAAATTTAAAAATGTAAGAAAGGAAAGTAT 3351
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QY 3412 TCCGCTATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3471
DB 3481 TCCGCTATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3540
QY 3472 AAACGCTATTAAGAAAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3531
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DB 3601 GACAGAGGATGATGATTAATCCAGCACTACAGCTGTTATATGACAAAGAAATTAAGAA 3660
QY 3592 TACTTCCAGAAACGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGAT 3651
DB 3661 TACTTCCAGAAACGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGAT 3720
QY 3652 GTAGACAGGTGGAATTAATCTCTTATGAGGAATAG 3687
DB 3721 GTAGACAGGTGGAATTAATCTCTTATGAGGAATAG 3756

RESULT 7
US-08-176-865-3
Sequence 3, Application US/08176865
Patent No. 5616319
GENERAL INFORMATION:
APPLICANT: Donovan, William P.
APPLICANT: Tan, Yuying
APPLICANT: Jany, Christine S.
APPLICANT: Gonzalez Jr., Jose M.
TITLE OF INVENTION: BACILLUS THURINGIENSIS CYET4 AND CYET5
TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Panitch Schwarze Jacobs & Nadel c/o A.S.
STREET: 1601 Market Street, 36th Floor
CITY: Philadelphia

STATE: Pennsylvania
COUNTRY: U.S.A.
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/176,865
FILING DATE: 30-DEC-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/100,709
FILING DATE: 29-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: Egolf, Christopher
REGISTRATION NUMBER: 72633
REFERENCE/DOCKET NUMBER: 7205-49
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-757-1590
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 3934 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: circular
MOLECULE TYPE: DNA (genomic)
FEATURE:
NAME/KEY: CDS
LOCATION: 67..3756
FEATURE:
NAME/KEY: misc_feature
LOCATION: 2253..2272
US-08-176-865-3

Query Match 72.9%; Score 2687.2; DB 1; Length 3934;
Best Local Similarity 83.5%; Pred. No. 0;
Matches 3089; Conservative 0; Mismatches 593; Indels 15; Gaps 3;

QY 1 TTGACTTCAAAATGGAAAAATGAAATGAATTAATTAATGCTTTATGATCCAGCTGTA 60
DB 67 TTACCTTCAAAATGGAAAAATGAAATGAATTAATTAATGCTTTATGATCCAGCTGTA 126
QY 61 TCGAATCATTCACACAAATGATCTATCACAGATGCTGTATTGAGATTCTTTGTGT 120
DB 127 TCGAATCTTCCACGCAATGAAATCTATCACAGATGCTGTATTGAGATTGCTGTGT 186
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DB 427 ATTGCTGATTAAGAAGTCTTAGGAAGAGCTATGATCTTACGACGAGCTCTTGAAGAT 486
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DB 607 TTATTAATGATTAATGCTCAAGCTGCAAAATTTACACCTTATTTATTTAGAGATGCTCT 666
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D 1981 CCGACAGAGTATACATTTTGAAGGCAATATGATTTAGAAAGACAACAAAGGCGGTGAAT 2040
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Q 2512 GTTGAAGGCCAATCGAAGGTGCGAGAAACGAATGATGATGCGCAACCAATTTTGAATGG 2571
D 2581 GTTGAAGGCCAATCGAAGGTGCGAGAAACGAATGATGATGCGCAACCAATTTTGAATGG 2640
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D 2641 AATCTGATCTAAGTGTCTCTGCAAGATGAGAAATATGTCGATCAATTCCTCATCAT 2700
Q 2632 TTCTCTTGTGATATGATATTTGATGACAGACTTTGATGAGATCTAAGGCTGTGGGTG 2691
D 2701 TTCTCTTGTGATATGATATTTGATGACAGACTTTGATGAGATCTAAGGCTGTGGGTG 2760

Q 2692 GTATTCAGATTAAAGCGCAAGAAAGTCACTCAAGACTAGGGAATCTGGAATTTATTTGA 2751
D 2761 GTATTCAGATTAAAGCGCAAGAAAGTCACTCAAGACTAGGGAATCTGGAATTTATTTGA 2820
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D 2821 GAGAAACCATTTATTTAGAGAAAGCACTGCTCTGTGTGAAGAGAGCAAGAAATTTGAGA 2880
Q 2812 GACAAAGGTGAAACTACATTTGAAACAAACGAGTATTTAGAGGCAAAAGAGCT 2871
D 2881 GACAAAGGTGAAACTACATTTGAAACAAACGAGTATTTAGAGGCAAAAGAGCT 2940
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D 3001 ATGATTCATGCGGAGATTAACCTGTTTCATGGAATTTGAGAGGCTTATCTTTCAGAAATTA 3060
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D 3061 CTTGTATCCCGGGGTGTAATGCGGAAATTTTGAAGAAATTTAGAGGTCGATTTATCT 3120
Q 3052 GCAATCTCCCTATACGATGCGAGAAATGTCGTTAAAAATGCTGATTTTATATATGATTA 3111
D 3121 GCAATGCTCTTATACGATGCGAGAAATGTCGTTAAAAATGCTGATTTTATATATGATTA 3180
Q 3112 GCATCTGGAATGTAAGGAGCATGATGATTAACAAGAGCCATCACCTTCTGTCTT 3171
D 3181 ACATGTTGGAATGTAAGGAGCATGATGATTAACAAGAGCCATCACCTTCTGTCTT 3240
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D 3301 TATATCCCTCGTGTCAAGCGTACAAAGAGGATATGAGAGGCTGTGTAACATTCAT 3360
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D 3361 GAAATCGAACAATTAACAAGCACTAAATTTAAAACTGTGAAGAAAGAGTAT 3420
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D 3721 GTAGATAGCGTGAATTAATCTCTCATGAGAAATAG 3756

RESULT 8
US-08-474-038-3
; Sequence 3, Application US/08474038

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; Patent No. 5679343
; GENERAL INFORMATION:
; APPLICANT: Domovian, William P.
; APPLICANT: Tan, Yiping
; APPLICANT: Jan, Christine S.
; APPLICANT: Gonzalez Jr., Jose M.
; TITLE OF INVENTION: BACILLUS THURINGIENSIS cYrET4 AND cYrET5
; TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Panitch Schwarze Jacobs & Nadel c/o A.S.
; STREET: 1601 Market Street, 36th Floor
; CITY: Philadelphia
; STATE: Pennsylvania
; COUNTRY: U.S.A.
; ZIP: 19103
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/474,038
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/176,865
; FILING DATE: 30-DEC-1993
; APPLICATION NUMBER: US 08/100,709
; FILING DATE: 29-JUL-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Egoie, Christopher
; REGISTRATION NUMBER: 27633
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 215-757-1590
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3934 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: circular
; MOLECULE TYPE: DNA (genomic)
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 67..3756
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 2253..2272
; US-08-474-038-3

Query Match      72.9%; Score 2687.2; DB 1; Length 3934;
Best Local Similarity 83.5%; Pred. No. 0;
Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;
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Q 1792 TCATTTGATTTGCAAAATTTCTGTAGTATTAATGTGCAATCTGGCAATCAATCTGGA 1851
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Q 1912 CCAATTAAGTCAACCTTCGAAGCAATTAATTAATTAATTAATTAATTAATTAATTAAT 1971
D 1981 CCAAGAGGTAACTTTGAGGCAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 2040
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D 3481 TCCGTTATGCTGATATGAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 3540
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D 3541 AAACGACTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 3600

QY 3532 GACAGAGGATGTGATTTATCCACCACTACAGCTGGTTATATGACAAAAGATTGAA 3591
 DB 3601 GACAGAGGATGTGATTTATCCACCACTACAGCTGGTTATGACAAAAGATTGAA 3660
 QY 3592 TACTCCACAGAAACCGATAGATGATGATGAGAAACGGAAGGAGTTTAT 3651
 DB 3661 TACTCCACAGAAACCGATAGATGATGATGAGAAACGGAAGGAGTTTAT 3720
 QY 3652 GTAGACAGCTGGAATTAATCTCTTATGAGAAATAG 3687
 DB 3721 GTAGATAGCTGGAATTAATCTCTCATGAGAAATAG 3756

RESULT 9
 US-08-779-046-3
 ; Sequence 3, Application US/08779046
 ; Patent No. 5854053
 ; GENERAL INFORMATION:
 ; APPLICANT: Donovan, William P.
 ; APPLICANT: Tan, Yuding
 ; APPLICANT: Jan, Christine S.
 ; APPLICANT: Gonzalez Jr., Jose M.
 ; TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5
 ; TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
 ; NUMBER OF SEQUENCES: 5
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Panlitch Schwarze Jacobs & Nadel c/o A.S.
 ; ADDRESSEE: Nadel
 ; STREET: 1601 Market Street, 36th Floor
 ; CITY: Philadelphia
 ; STATE: Pennsylvania
 ; COUNTRY: U.S.A.
 ; ZIP: 19103
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patentin Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/779,046
 ; FILING DATE: 06-JAN-1997
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 08/100,709
 ; FILING DATE: 29-JUL-1993
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Egolf, Christopher
 ; REGISTRATION NUMBER: 27633
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 215-757-1590
 ; INFORMATION FOR SEQ ID NO: 3:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 3934 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: double
 ; TOPOLOGY: circular
 ; MOLECULE TYPE: DNA (genomic)
 ; FEATURE:
 ; NAME/KEY: CDS
 ; LOCATION: 67..3756
 ; NAME/KEY: misc_feature
 ; LOCATION: 2253..2272
 ; US-08-779-046-3

Query Match 72.9%; Score 2687.2; DB 2; Length 3934;
 Best Local Similarity 83.5%; Pred. No. 0;
 Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;
 QY 1 TTGACTCAATAGGAAATGAGAAATGAAATTAATGCTTATGATTCAGCTGTA 60
 DB 67 TTGACTCAATAGGAAATGAGAAATGAAATTAATGCTTATGATTCAGCTGTA 126

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1312 CCTATGAGTCACTGCGCTTCAATTTAAAGATTGAAAAGTGAATTTACCAACCAAAAACA 1371
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1372 ACAGAACGACCAATTTATGATCATATGATCATATGATTTATCTCATATAGGCTCATTTCA 1431
1441 ACAGAACGACCAATTTATGATCATATGATCATATGATTTATCTCATATAGGCTCATTTCA 1500
1432 CAATCTAGGAGTCAATGATCATATTTCTTGAACGACCGTATGAGATCTGACAAAT 1491
1501 GGAAGACCTTTGAGAGCACAGTCTATCTTGAACGATGATGATGATGATGATGATGAT 1560
1492 ACCATTTAGTTCAGATGATCATATCAAAATACCATTTGTTAAATCATTTCACTTAACTCA 1551
1561 ACCATTTAGTTCAGATGATCATATCAAAATACCATTTGTTAAATCATTTCACTTAACTCA 1620
1552 GGTACCTCTGTAGTCAATGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGT 1611
1621 GGTGTACTGTGTGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGT 1680
1612 AATGATAGTGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1671
1681 ACCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1740
1672 GTGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1731
1741 GTGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1800
1732 ACTACTTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1791
1801 ACTGTTATATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1860
1792 TCAATTTAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1851
1861 AGTATTAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1920
1852 ATGAT 1911
1921 ACATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1980
1912 CCAATTTAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1971
1981 CCAAGAT 2040
1972 GCTCTTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2031
2041 GCTCTTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2100
2032 GATCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2091
2101 GATCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2160
2092 GAATTTCTTGAAGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2151
2161 GAATTTCTTGAAGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2220
2152 GATCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2211
2221 GATCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2280
2212 AATTTCAATCTATCTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2271

2281 AACTTCCCTCTATTAATGAGCTATGAACTGAAAGTGTGGGAAATGCGAAATGTTACC 2340
2272 ATCCAGAAAGAAATGAGCTATTTAAAGAAATGAGCTATGAAAGTGTGGGAAATGCGAAATGTTACC 2331
2341 ATTCAGAAAGAAATGAGCTATTTAAAGAAATGAGCTATGAAAGTGTGGGAAATGCGAAATGTTACC 2400
2332 GAGTGTATTCGAGATTTATATCAAAAAATGAGAGTGTGGGAAATGCGAAATGTTACC 2391
2401 GAGTGTATTCGAGATTTATATCAAAAAATGAGAGTGTGGGAAATGCGAAATGTTACC 2460
2392 CGCTACCAATTTAAGAGGCTATTTAAGATGATGATGATGATGATGATGATGATGATGATGATGAT 2451
2461 CGCTACCAATTTAAGAGGCTATTTAAGATGATGATGATGATGATGATGATGATGATGATGATGAT 2520
2452 TATATGCGAAACATGAAACATGGAATGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAG 2511
2521 TATATGCGAAACATGAAACATGGAATGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAGGTCAG 2580
2512 GTTGAAGCCCAATCGGAAGTGTGGGAAACCGAATGATGATGATGATGATGATGATGATGATGATGAT 2571
2581 GTTGAAGCCCAATCGGAAGTGTGGGAAACCGAATGATGATGATGATGATGATGATGATGATGATGAT 2640
2572 AATCTGATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2631
2641 AATCTGATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2700
2632 TTCTCTTGAATTTATGATTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2691
2701 TTCTCTTGAATTTATGATTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2760
2692 GTATTCAGATTTAAGAGCGAGAAAGTCTATGAAAGTCTATGAAAGTCTATGAAAGTCTATGAAAGT 2751
2761 GTATTCAGATTTAAGAGCGAGAAAGTCTATGAAAGTCTATGAAAGTCTATGAAAGTCTATGAAAGT 2820
2752 GAGAAACATTTATGAGAGAGCACTGTCTGTGTGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2811
2821 GAGAAACATTTATGAGAGAGCACTGTCTGTGTGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2880
2812 GAGAAACATTTATGAGAGAGCACTGTCTGTGTGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2871
2881 GAGAAACATTTATGAGAGAGCACTGTCTGTGTGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2940
2872 GTGATGCTTTATTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2931
2941 GTGATGCTTTATTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3000
2932 ATGATTCATGCGGAGATTAATCTGTCATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2991
3001 ATGATTCATGCGGAGATTAATCTGTCATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3060
2992 TCTGTTATCCCGGATGATTAATGCGGAAATTTTGAAGATTTAAGAGTGTGATGATGATGATGAT 3051
3061 CCGTGTATCCCGGATGATTAATGCGGAAATTTTGAAGATTTAAGAGTGTGATGATGATGATGATGAT 3120
3052 GCAATCTCCCTATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3111
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3112 GCAATCTCCCTATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3171
3181 ACATGTTGAAATGTAAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3240
3172 GTTATCCCAAGATGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3231
3241 GTTATCCCAAGATGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3300
3232 TATATCTCCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3291
3301 TATATCTCCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3360
3292 GAAATGAGAAATATGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3351

Db 3361 GAAATGAGAACATACAGACGACTTAAATTTAAAACTGTGAAGAGAGAGTGTAT 3420
Qy 3352 CCAACGATACAGAAAGTGTAAATGATTAATGACACACCAAGTACAGAGTATGTAA 3411
Db 3421 CCAACGATACAGAAAGTGTAAATGATTAATGACACACCAAGTACAGAGTATGTAA 3480
Qy 3412 TCCCGTAATGCTGTGATGATGAGATGATGATGATGATGATGATGATGATGATGAT 3471
Db 3481 TCCCGTAATGCTGTGATGATGAGATGATGATGATGATGATGATGATGATGATGAT 3540
Qy 3472 AAACCGCTATAGAT 3531
Db 3541 AAACCGCTATAGAT 3600
Qy 3532 GACAGAGGATGTGATGATTAATGACACGACGAGTGTATGACAAAGAGATTAAGAA 3591
Db 3601 GACAGAGGATGTGATGATTAATGACACGACGAGTGTATGACAAAGAGATTAAGAA 3660
Qy 3592 TACTTCCAGAAACCGATAGATGATGATGATGATGATGATGATGATGATGATGAT 3651
Db 3661 TACTTCCAGAAACCGATAGATGATGATGATGATGATGATGATGATGATGATGAT 3720
Qy 3652 GTAGACAGCTGAGATTAATCTCTTATGAGAGATAG 3687
Db 3721 GTAGATAGCTGAGATTAATCTCTTATGAGAGATAG 3756

RESULT 10

US-08-881-340-3
Sequence 3, Application US/08881340
Patent No. 5942658

GENERAL INFORMATION:
APPLICANT: Donovan, William P.

APPLICANT: Tan, Yiping

APPLICANT: Gonzalez Jr., Jose M.

TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5

TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS

NUMBER OF SEQUENCES: 5

CORRESPONDENCE ADDRESS:

ADDRESSEE: Panlitch Schwarze Jacobs & Nadel c/o A.S.

ADDRESS: 1601 Market Street, 36th Floor

CITY: Philadelphia

STATE: Pennsylvania

COUNTRY: U.S.A.

ZIP: 19103

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/881,340

FILING DATE: 24-JUN-1997

CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/100,709

FILING DATE: 29-JUL-1993

ATTORNEY/AGENT INFORMATION:

NAME: Egolf, Christopher

REGISTRATION NUMBER: 27633

REFERENCE/DOCKET NUMBER: 7205-49

TELECOMMUNICATION INFORMATION:

TELEPHONE: 215-757-1590

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 3934 base pairs

TYPE: nucleic acid

STRANDEDNESS: double

TOPOLOGY: circular

MOLECULE TYPE: DNA (genomic)

FEATURE:

NAME/KEY: CDS
LOCATION: 67..3756
FEATURE:
NAME/KEY: misc feature
LOCATION: 2253..2272
US-08-881-340-3

Query Match 72.9%; Score 2687.2; DB 2; Length 3934;
Best Local Similarity 83.5%; Pred. No. 0;
Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;

Qy 1 TTGACTTCAATAGGAAAAAGATGAAATTAATTAATGCTTTATTCAGTTCAGCTGTA 60
Db TTGACTTCAATAGGAAAAAGATGAAATTAATTAATGCTTTATTCAGTTCAGTTCAGT 126
Qy 61 TCGAATCATTTCCACAAATGATCTATCCAGATGCTGATTAAGAGATCTTTGTGT 120
Db TCGAATCATTTCCACAAATGATCTATCCAGATGCTGATTAAGAGATCTTTGTGT 186
Qy 127 TCGAATCATTTCCACAAATGATCTATCCAGATGCTGATTAAGAGATCTTTGTGT 186
Db TCGAATCATTTCCACAAATGATCTATCCAGATGCTGATTAAGAGATCTTTGTGT 246
Qy 121 ATAGCCGAGGGGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 180
Db ATAGCCGAGGGGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 246
Qy 187 GTAGCCGAGGGGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 246
Db GTAGCCGAGGGGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 306
Qy 181 AACATAGCTGTAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 240
Db AACATAGCTGTAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 306
Qy 241 TTTTATAGTTTTCTGTTGATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 300
Db TTTTATAGTTTTCTGTTGATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 366
Qy 307 TTTTATAGTTTTCTGTTGATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 366
Db TTTTATAGTTTTCTGTTGATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 426
Qy 301 CTAGAACATGTCGAACTTTTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 360
Db CTAGAACATGTCGAACTTTTAATTAATTAATTAATTAATTAATTAATTAATTAAT 426
Qy 367 CTGGAACATGTCGAACTTTTAATTAATTAATTAATTAATTAATTAATTAATTAAT 426
Db CTGGAACATGTCGAACTTTTAATTAATTAATTAATTAATTAATTAATTAATTAAT 480
Qy 361 CTGTCGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 420
Db CTGTCGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 486
Qy 427 ATGTCGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 486
Db ATGTCGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 546
Qy 421 TGGCTAGAAACCGTATGATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 480
Db TGGCTAGAAACCGTATGATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 546
Qy 487 TGGCTAGAAACCGTATGATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 546
Db TGGCTAGAAACCGTATGATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 606
Qy 481 TTAGAACCTGATTTTCTTAATGATGCGCTTTTGGCAATTAAGAAACCAAGAGTCCA 540
Db TTAGAACCTGATTTTCTTAATGATGCGCTTTTGGCAATTAAGAAACCAAGAGTCCA 606
Qy 547 TTAGAACCTGATTTTCTTAATGATGCGCTTTTGGCAATTAAGAAACCAAGAGTCCA 606
Db TTAGAACCTGATTTTCTTAATGATGCGCTTTTGGCAATTAAGAAACCAAGAGTCCA 660
Qy 541 TTATTAATGATTAATGCTCAAGCTGCAATTAACCTTATTAATTAATTAATTAATG 600
Db TTATTAATGATTAATGCTCAAGCTGCAATTAACCTTATTAATTAATTAATTAATG 666
Qy 607 TTATTAATGATTAATGCTCAAGCTGCAATTAACCTTATTAATTAATTAATTAATG 666
Db TTATTAATGATTAATGCTCAAGCTGCAATTAACCTTATTAATTAATTAATTAATG 726
Qy 601 CTTTGTGATGATTTGGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 660
Db CTTTGTGATGATTTGGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 726
Qy 667 CTTTGTGATGATTTGGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 726
Db CTTTGTGATGATTTGGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 786
Qy 661 GTGGAACCAACGAGATTAATTCGACTTTTGGCTTACATGCAAGAGAGAGAGAGAG 720
Db GTGGAACCAACGAGATTAATTCGACTTTTGGCTTACATGCAAGAGAGAGAGAGAG 786
Qy 727 ATCAGATTAATGAG 786
Db ATCAGATTAATGAG 846
Qy 721 AGCTTGAAG 846
Db AGCTTGAAG 906
Qy 781 AGCTTGAAG 840
Db AGCTTGAAG 906
Qy 847 AGCTTGAAG 906
Db AGCTTGAAG 966
Qy 841 ATTAATTAATGATGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900
Db ATTAATTAATGATGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 966
Qy 907 ATCAATTAATGATGCTTACATGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 966
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Qy 901 GTAAAT-----ATGCAAGATTAATTAATTAATTAATTAATTAATTAATTAATTA 954
Db GTAAAT-----ATGCAAGATTAATTAATTAATTAATTAATTAATTAATTAATTA 994

Db 967 GCACCTTCAGGATTTGCAAGTACGAATTTGGTTTAATATATGCAACCATCGTTTTCGCC 1026
Qy 955 ATAGAGACTGGGTTATCCGAAGCCCGCATCTACTGTAATTTCTAGAAACAATTACATTT 1014
Db 1027 ATAGAGCTGCATTTTCAGGCTCCGCATCTACTGTAATTTTCAGAAACAATTACATTT 1086
Qy 1015 TTATGACCTTCATACGATGAGAGTGTCTATGCGCATATGACTTACTGGCGGGGACACA 1074
Db 1087 TACGTCGATCAACCCGTGGAGTAGCACTCAACATATGAAATATTTGGGTGGGACATAGG 1146
Qy 1075 ATTCAATCTCGGCCAATATGAGGCGGATTAATATCTCAACGCAATGGGTCTACCA---AT 1131
Db 1147 CTATACCTCCGCCAATATGAGGAGCATTTATATCTCAACAGACCAAGACTTATATATAT 1206
Qy 1132 ACTTCTATTAATCTGTATAGATTATCATCTTCTCTGAGACGTATATTTGGATGTAATCA 1191
Db 1207 ACTTCAATTAATCTGTATAGATTATCATCTGTAAGTTCGTGAGACGTTTATAGAAAGAAATCA 1286
Qy 1192 TATGCAAGATGCTTCTATGAGGAAATTTACTTGAACCTATTCATGGTGTCCCTACGTGT 1251
Db 1267 AATGCAAGGACAAATAT------ACTATTTTACTACTCTCTGTGAATGAGTACCTTGGGCT 1320
Qy 1252 AGATTTAATTTTAGAAACCTTCAGAAATCTTTGAAAAGGTACTGCTAATCTATATAGTCAA 1311
Db 1321 AGATTTAATTTTATTAACCTTCAGAAATTTTATATAGAGGCGCACACTACTATACATGTCAA 1380
Qy 1312 CCTATAGTCACTCGGCTTCAATTAAGAAATTCAGAACTGAAATTTACACAGAAACA 1371
Db 1381 CCGATCAGGGAGTTGGGATTCATATTTTGAATTCAGAACTGAAATTTACACAGAAACA 1440
Qy 1372 ACAGAACGACCAATTAATGAATCATATATGTCATATGTTATCTCATATAGGGCTCATTTCA 1431
Db 1441 ACAGAACGACCAATTAATGAATCATATATGTCATATGTTATCTCATATAGGACTATATCA 1500
Qy 1432 CAATCTAGGGGTCATATACAGATATATCTTGGAGCGACCGTATGAGATTCGTAACAAT 1491
Db 1501 GGAACACTTTTGAGAGCACGTCATATTTTGGAGCGATGTAATGAGATTCGTAACAAT 1560
Qy 1492 ACCATTAAGTTCAGATATGATTAACAACAATACCATTTGTTAAATGATTCACACTTAATTC 1551
Db 1561 ACATATGACCAATTAATTAATTAACCAATTCATTTGTTAAAGCACTGAAATCTTCAATTC 1620
Qy 1552 GGTACTCTGTAGTCACTGGCCAGATTTTACAGAGGGGATATATTCGAATCTAACGTT 1611
Db 1621 GGTGTACTGTGTGGAGGGCCAGATTTTACAGGTGGGATATCTTCGTAACAAT 1680
Qy 1612 AATGTATGTATCTAATATATGCTTAAATTTTAAATATATCATATACAGCGGTATTCGC 1671
Db 1681 ACCGATACATTTGAGATATATCAATTAATTAATATGTCATATTCGTAACAATTCGC 1740
Qy 1672 GTGAGATTCGTTATGCTGCTTCTCAACAATGGTCCGTAAGGGTAACTGTCGAGGGAGT 1731
Db 1741 GTAAAGATTCGTTATGCTTCTTACTACAGATTTTACAAATTTTTCAGGAATTAATGAAACC 1800
Qy 1732 ACTACTTTTGAATCAAGGATTCCTTATGATATATGAGTCAATGAGTCTTTCGACATCTCAA 1791
Db 1801 ACTGTATATTTGGTATATTTCTCAAGAACTATGAAATGAGGGGATATATTTAGAAATATAGA 1860
Qy 1792 TCAATTAATTTGAGAAATTTCCGTATGATTTATAGTCACTGGCACTCAACCTGCTGGA 1851
Db 1861 AGTTTATGAACCTGAGGATTTAGTACTCTTTTAAATTTTAAATGCGCAAGACATTC 1920
Qy 1852 ATAAATTAATTAATTAATGAGTAGAACAAAGTTTCACTTGTATTAATTAATTAATTAAT 1911
Db 1921 ACATTTGGTCTCAGAGTTTTCAAATCAGGAAGTTTATATATATAGTTCGAAATTTGTT 1980
Qy 1912 CCAATTAATGCAACCTTTCAGAGCAATATGATTTAGAAAGGGCGCAAGGGCGGTGAAT 1971
Db 1981 CCAAGAGAGGTAACTTTGAGGCGAGATATGATTTAGAAAGAGCAAAAGGGCGGTGAAT 2040
Qy 1972 GCTCTGTTTACTAATAGAAATCCAAAGAAATGAAAACAGATGTCAGCATATCATATTT 2031
Db 2041 GCTCTGTTTACTTCAAAATCCAAAGAAATGAAAACAGATGTCAGCATATCATATTT 2100

Qy 2032 GATCAAGTATCCAAATTTAGTGGCGTGTATTCGGATGAATTTCTGATAGTAAAGAGA 2091
Db 2101 GACCAAGTGTCCAAATATGTTGGCATGTTTATCAGATGAATTTTCTGATGAGAAAGGA 2160
Qy 2092 GAATTAATCTTGAGAAAGTGAATATGCGAAACGACTCAGTGTATGAAAGAACTTCTCCA 2151
Db 2161 GAATTAATTTGAGAAAGTGAATATGCGAAAGGACTCAGTGTATGAAAGAACTTCTCCA 2220
Qy 2152 GATCCAACTTCACATCATCAATATAGCAACGAGACTTCATATCTAATATGACCAATTCG 2211
Db 2221 GATCCAACTTCACATCATCAATATAGCAATGTAATGTTTCCATTCATGATGACCAATTC 2280
Qy 2212 AATTTCAATCTATTCATGAAACAATCTGAACATGATGTTGGGAGAGTGAAGACATTACA 2271
Db 2281 AACTTCCCTCTATTAATGAGCTATCTGAACATGATGTTGGGAGAGTGAAGATTTACC 2340
Qy 2272 ATCCAGAGAAAGAAATGACGTATTTAAAGAAATTAAGTCACTACCTACCGGGACCTTTAT 2331
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Db 2581 GTTGAAGCCCAATCCGAAAGTCCGAGAACCCGAATGAGTCCGACCAATTTTGAATGG 2640
Qy 2572 AATCTGATCTAGATTTGTTCTCTGAGAGATGAGAAATATGTCATATTTCCCATCAT 2631
Db 2641 AATCTGATCTAGATTTGTTCTCTGAGAGATGAGAAATATGTCATATTTCCCATCAT 2700
Qy 2632 TTCTCTTGGATATGATATTTGATGATGACACAGACTTGCATGAAATCTTAAAGCGTGTGG 2691
Db 2701 TTCACTTGGATATGATATTTGATGATGATGACACAGACTTGCATGAAATCTTAAAGCGTGTGG 2760
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Db 2821 GAGAAACCATTAATTAAGAGAGACACTGTCTCGTGTGAAGAGACAGAGAAATATGAGA 2880
Qy 2812 GACAAACGTGAATACTCAATTTGAAACAAACGAGTATATACAGAGCAAAAGAAAGT 2871
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Qy 2872 GTGAGCTTTAATTTGATGATTTCTCAATATATATGATTAACAACCGGATACAAACTTGGC 2931
Db 2941 GTGAGCTTTAATTTGATGATTTCTCAATATATATGATTAACAACCGGATACAAACTTGGC 3000
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Db 3001 ATGATTCATGCGGACAGATTAATCTTGTATCATGCAATTTGAGAGGCTTATCTTCAATTA 3060
Qy 2992 TCTGTATCCCGGCTGTAATATGCGAAATTTTGAAGATTAAGAGTTCGATTTATCACT 3051
Db 3061 CCTGTATCCCGGCTGTAATATGCGAAATTTTGAAGATTAAGAGTTCGATTTATCACT 3120
Qy 3052 GCAATCTCCCTATATGATGCGAGAAATGCTTAAATATGCTATTTAATATGATTA 3111
Db 3121 GCAATCTCCCTATATGATGCGAGAAATGCTTAAATATGCTATTTAATATGATTA 3180

QY 3112 GCATGCTGGAATGTAAGGAGCATGATGATGTAACAAGAGCATCAAGCTTCTGCTT 3171
 DB 3181 ACATGTTGGAATGTAAGGAGCATGATGATGTAACAAGAGCATCAAGCTTCTGCTT 3240
 QY 3172 GTATCCCAAGATGGAGAGAGTGTCAAGAGAGTGTGCTGTCTGCTGCGGCGGCG 3231
 DB 3241 GTTATCCCAAGATGGAGAGAGTGTCAAGAGAGTGTGCTGTCTGCTGCGGCGGCG 3300
 QY 3232 TATATCTCCGCTGCAAGGCTCAAGAGAGATGATGAGAGGCTTGTGTAAAGATCCAT 3291
 DB 3301 TATATCTCCGCTGCAAGGCTCAAGAGAGATGATGAGAGGCTTGTGTAAAGATCCAT 3360
 QY 3292 GAAATGAGAGCAATTCAGAGCACTTAAATTTAAACCTGTGAAGAGAGAGTGTAT 3351
 DB 3361 GAAATGAGAGCAATTCAGAGCACTTAAATTTAAACCTGTGAAGAGAGAGTGTAT 3420
 QY 3352 CCAAGAGATTCAGAGAGCTGATGATGATGATGATGATGATGATGATGATGATGAT 3411
 DB 3421 CCAAGAGATTCAGAGAGCTGATGATGATGATGATGATGATGATGATGATGATGAT 3480
 QY 3412 TCCCGTATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3471
 DB 3481 TCCCGTATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3540
 QY 3472 AAACCGATTCATGAG 3531
 DB 3541 AAACCGATTCATGAG 3600
 QY 3532 GACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3591
 DB 3601 GACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3660
 QY 3592 TACTTCCCAAG 3651
 DB 3661 TACTTCCCAAG 3720
 QY 3652 GTAGACAGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3687
 DB 3721 GTAGACAGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3756

 RESULT 11
 US-08-040-751-4
 / Sequence 4, Application US/08040751
 / Patent No. 5407825
 / GENERAL INFORMATION:
 / APPLICANT: Sick, August J
 / TITLE OF INVENTION: No. 5407825el Bacillus thuringiensis isolates
 / TITLE OF INVENTION: active against Lepidopteran pests and Genes Encoding No. 54078
 / NUMBER OF SEQUENCES: 4
 / CORRESPONDENCE ADDRESS:
 / ADDRESSEE: DAVID R. SALIMANCHIK
 / STREET: 2421 N.W. 41st STREET, SUITE A-1
 / CITY: GAINESVILLE
 / STATE: FL
 / COUNTRY: USA
 / ZIP: 32606
 / COMPUTER READABLE FORM:
 / MEDIUM TYPE: Floppy disk
 / COMPUTER: IBM PC compatible
 / OPERATING SYSTEM: PC-DOS/MS-DOS
 / SOFTWARE: Patent in Release #1.0, Version #1.25
 / CURRENT APPLICATION DATA:
 / APPLICATION NUMBER: US/08/040,751
 / FILING DATE: 19930329
 / CLASSIFICATION: 435
 / ATTORNEY/AGENT INFORMATION:
 / NAME: SALIMANCHIK, DAVID R.
 / REFERENCE/DOCKET NUMBER: MA39.C1.D3
 / TELECOMMUNICATION INFORMATION:
 / TELEPHONE: 904-375-8100

/ TELEFAX: 904-372-5800
 / INDEX:
 / INFORMATION FOR SEQ ID NO: 4:
 / SEQUENCE CHARACTERISTICS:
 / LENGTH: 3522 base pairs
 / TYPE: NUCLEIC ACID
 / STRANDEDNESS: double
 / TOPOLOGY: linear
 / MOLECULAR TYPE: DNA (genomic)
 / HYPOTHEICAL: NO
 / ANTI-SENSE: NO
 / ORIGINAL SOURCE:
 / ORGANISM: Bacillus thuringiensis
 / STRAIN: aizawai
 / INDIVIDUAL ISOLATE: PS81A2
 / IMMEDIATE SOURCE:
 / LIBRARY: LambdaGem - 11 (tm) Library of August Sick
 / CLONE: 81A2
 / US-08-040-751-4

 Query Match 48.6%; Score 1793.4; DB 1; Length 3522;
 Best Local Similarity 71.9%; Pred. No. 0;
 Matches 2497; Conservative 0; Mismatches 861; Indels 117; Gaps 7;

 QY 228 ACAATAGCTAGTTTATATAGTTTCTTGTGTAATATAGCCCGGCGAGATGCA 287
 DB 147 ACTAGGGAGATTTATATCTTGCTGTTGATGATATAGGGGCTATAGTCTTCA 206
 QY 288 GTGGGAATTTTCTTGAACATGTCGACCACTTATTAACAATAAGAGAAATGC 347
 DB 207 ATGGATATATTTTATAGCAATTAAGCTATGATGATGATGATGATGATGATGATGAT 266
 QY 348 TAGGAATCGCACTTGTCTGATTAACAAGTTTATAGAGATTCCTTTAGAGCTTATCA 407
 DB 267 TAGGAATCGCACTTGTCTGATTAACAAGTTTATAGAGATTCCTTTAGAGCTTATCA 326
 QY 408 GTCACTTGAAGATGCTTGAAGAACCGTATGATGATGATGATGATGATGATGATGAT 467
 DB 327 TGTCTTTAAACCTGGAGAGATGATGATGATGATGATGATGATGATGATGATGATGAT 386
 QY 468 CCAATATATAGCTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 527
 DB 387 TCAATTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 446
 QY 528 CCAAGAGTTCCATTTAT 587
 DB 447 TATGAAATTCCTCTTTAT 506
 QY 588 GAGAGATGCTCTCTTTTGTGATGATGATGATGATGATGATGATGATGATGATGATGAT 647
 DB 507 GAGAGATGCTCTCTTTTGTGATGATGATGATGATGATGATGATGATGATGATGATGAT 566
 QY 648 TTATGAGCCCAAGTGAACAAACGAGATTAATTCGACTATTTGGTAGATGATTA 707
 DB 567 TTAT 626
 QY 708 TACAGTCTTAATATAGCTTGAAGAGCAAAATGCG--CAAGTTGGTGGCTTATATCA 764
 DB 627 TACGGGCTTAATATAGCTTGAAGAGCAAAATGCG--CAAGTTGGTGGCTTATATAG 686
 QY 765 ATTCCTAGATCTTAAGCTTGAAGAGCAAAATGCG--CAAGTTGGTGGCTTATATAG 824
 DB 687 GTTTAAGAGAGATTAAT 746
 QY 825 CACTGCACTTATCAATTAAT 884
 DB 747 TTTAT 806
 QY 885 AATTGAGCAAGAGGATTAAT 944
 DB 807 -----GGTAATTAAT 842
 QY 945 GTTTCCGCTATATAGACTGCGGTTATCGAAGCCGCACTTACTTATTTCTAGAACCA 1004

Db 843 TTTCGAGAGTATGAAATTCAGCTATTAGAGTCCCATCTTATGGAATTTCTTAATAA 902
Qy 1005 ACTTACAAATTTTACGACTTCATCAAGATGAGTCTACTAGCATATGACTTACTGGCG 1064
Db 903 TATATATTATGACACGTGATTTA-----ATTAGAGCGCTTCACTATTGGGC 947
Qy 1065 GGGGACACAACTTCATCTCGGCCAATAGAGCGGATTAATTCCTCAACGCAATGGGTC 1124
Db 948 GGGGCAATCGTGTAACTTCTCATATTTTACCGGATGTTCCCAAGTGTAAAGTCCCTCAATA 1007
Qy 1125 TACCAATCTTCTTATTAATCTGTAAATATATCATCTTCTCGAGAACGTATATTGGAC 1184
Db 1008 CGGATTAATCTGCAACCGCAAGCCGAGTCAATATGCTCTTAGCACTTTCCAGGTCT 1067
Qy 1185 TGAATCATATGACGAGTGTCTTCTATGGGAATTTACCTTGAACCTTATCATGGTGTCCC 1244
Db 1068 TATCTATTTTATAGAACACTATACAGCCTTCTTCCGAAGATCCGATATATATTATGCC 1127
Qy 1245 TACTGTATGATTTAATTTTAGAACCCTCAGAACTCTTTGAAAGAGTACTGTAACTA 1304
Db 1128 AACATTAGGAATTAATGTATGTGCAAGGGGTAGGATTCATTCAACCAATATATGGTGAAGT 1187
Qy 1305 TACTCAACCTATGAGTCACTGGGCTTCAATTAAGATTCAGAACTGAATTACCAAC 1364
Db 1188 TCTATATAGAGAGAGAGAACAGTATGCTCTTGAAGGTGCGCAATTTGA-----CGG 1241
Qy 1365 AGAACAACAGAGACGACCAATATTATGAAATCATATAGTATAGTATCTCAATAGGGCT 1424
Db 1242 TGAATATCTATTAGTGTAGATATGATCAATTAAGTCACTTACATTAACAGGTCTT 1301
Qy 1425 CATTTCAATCATAGGAGTGCATGATACATATATCTTTGAGCAGCAGGTAGTCAATGC 1484
Db 1302 ATATATATCTAATTAATTAATCTAGCTTGCACATTTGTTTGGACATCACTACGTCTACTGA 1361
Qy 1485 TACAATATACATATAGTTCAGATAGCAATTAACAATATCCATGTGTAAATACATCAACT 1544
Db 1362 TCGAAATATATATCTATCCGATGTATATACAAATATCAATGTGTAAATCATTTCCCT 1421
Qy 1545 TAATTCAGTACCTCTGTATGTCAGTGGCCAGAGATTTACAGAGAGGATTAATATCCGAAC 1604
Db 1422 TACTTCAAGTACTCTGTATGTCAGAGGCCAGAGATTTACAGAGAGGATTAATATCCGAAC 1481
Qy 1605 TAACTTAATGTAGTGTATCTAATAGTATGAGTCTTAATTTTAATATATCATCATTAACGC 1664
Db 1482 TAACTTAATGTAGTGTATCTAATAGTATGAGTCTTAATTTTAATATATCATCATTAACGC 1541
Qy 1665 GATATCCCGTGAAGTTCGTATATGCTGCTTCAAAACAATGTCTCTGAAGGATTAATCTGCG 1724
Db 1542 GATATCCCGTGAAGTTCGTATATGCTGCTTCAAAACAATGTCTCTGAAGGATTAATCTGCG 1601
Qy 1725 AGGAGTACTACTTTTGTATGATCAAGATTCCTAGTATCATATGATGCAAAATGATCTTTGAC 1784
Db 1602 AGGAGTACTACTTTTGTATGATCAAGATTCCTAGTATCATATGATGCAAAATGATGCTTTGAC 1661
Qy 1785 ATCTCATCATTTTATGATTTGCAAGATTTCTGTAGATATTAGTCAATCTGGCAGTCAAAC 1844
Db 1662 ATCTCATCATTTTATGATTTGCAAGATTTCTGTAGATATTAGTCAATCTGGCAGTCAAAC 1721
Qy 1845 TGTGTGAATATGATTAATGATTAATGAGTATGACAAACGTTTCACTTTGATTAATTTGA 1904
Db 1722 TGTGTGAATATGATTAATGATTAATGAGTATGACAAACGTTTCACTTTGATTAATTTGA 1781
Qy 1905 ATTCATTTCAATTTACTGCAACCTTTCGAGAGAAATGCAATTTTGAAGAGGCGGAGAGGC 1964
Db 1782 ATTTATCCAGTTGATGACATTTTGAAGAGAAATGATTTTGAAGAGGCGGAGAGGC 1841
Qy 1965 GGTGAATGTCTGTATTACTATATGCAATCCAGAAAGATTGAAAAAGATGTGACAGATTA 2024
Db 1842 GGTGAATGTCTGTATTACTTCTTCAATCAATCGAGTTAAAAAGATGTGACAGATTA 1901
Qy 2025 TCAATATGATCAAGTATCCAAATTTAGTGGGTGTTTATCGAGTAATCTGCTTAAGTGA 2084

Db 1902 TCAATATGATCAAGTATCCAAATTTAGTATGTTGTTTATCCGAGATTTTGTCTGATGA 1961
Qy 2085 AAGAGAAATTAATCTTGAAGAAAGTGAATAATGCGAAAAGCATGATGATGAAGAACTT 2144
Db 1962 AAGAGAAATTTGCGAGAAAGTGAATAATGCGAAAGCATGATGATGAGCGAAATTT 2021
Qy 2145 ACTTCAAGATCCAACTTTCATCATTCATTAAGCAACGAGCTTCAATATCTACTAATGA 2204
Db 2022 ACTTCAAGATCCAACTTTCAGAGGATCAATAGCAACGAGC----- 2064
Qy 2205 GCAATGAATTTCAATCTATCATGAAAGATCGAAATGATGAGGAGAGTGAAG 2264
Db 2065 -----CGTGGCTGTGAGAGAGATGACGA 2087
Qy 2265 CATTAATCCAGAAAGAAATGACGATTTTAAAGAAATTAAGTCACTACCGGGAC 2324
Db 2088 TATTAACATCCAGAGAGAGATGACGATTTCAAGAGAAATTAAGTCACTACCGGTAC 2147
Qy 2325 TTTTAATGAGTGTATCCAGATTTTATATCAAAAAATGAGAGTCCGAATTTAAAGC 2384
Db 2148 CTTTGAATGAGTGTATCCAGATTTTATATCAAAAAATGAGAGTCCGAATTTAAAGC 2207
Qy 2385 TTAATCTGCTACCAATTAAGAGGTATATTGAAGATAGTCAAGATTTAAGATATTT 2444
Db 2208 CTATTAACCTGTACCAATTAAGAGGTATATTGAAGATAGTCAAGATTTAAGATATTT 2267
Qy 2445 GATTCGTTAATATGCGAAACATGAAACATGAGTTCAGAGTACCGAGTCCGATAGGC 2504
Db 2268 AATTCGCTACAAATGCGAAACAGAAACAGTAATGTACAGAGTACCGGTCTTATAGCC 2327
Qy 2505 GCTTTCAATGAAAGCCCAATCGAAAGTGGGAGAACCGAATGATGCGACCACTT 2564
Db 2328 GCTTCAATGAGTGAAGTCAATGAGAGTGTGAGAAACCGAATCGGTGTGCGACACT 2387
Qy 2565 TGAATGAATCCGATCTGATGTTGTTCCGCAAGATGAGAAATATGTCGATCACTT 2624
Db 2388 TGAATGAATCCGATTTGATGATTTGTTCTGCAAGACGGGAAATATGCAATCACTT 2447
Qy 2625 CCATCATTTTCTCTTGGATTTGATATTTGATCAAGACTTGCATGAGATCTAGGCGT 2684
Db 2448 CCATCATTTTCTCTTGGATTTGATATGATGATGATGATGATGATGATGATGATGAT 2507
Qy 2685 GTGGGTGTATTCAGATTAAGACGAGAGAGTCAATGCAAGATGAGGATCTGAAT 2744
Db 2508 GTGGGTGTATTCAGATTAAGACGAGAGAGTCAATGCAAGATGAGGATCTGAAT 2567
Qy 2745 TATTTGAAGAAACCATTAATTTAGAGAGACATGCTCTCGTGTGAAGAGACAGAA 2804
Db 2568 TATCGAAGAAACCATTAATTTAGAGAGACATGCTCTCGTGTGAAGAGACAGAA 2627
Qy 2805 ATGAGAGACAAACGTGAAACCAATTAATTTGAAACCAACGATATATACAGAGCAA 2864
Db 2628 ATGAGAGACAAACGTGAAACCAATTAATTTGAAACCAACGATATATACAGAGCAA 2867
Qy 2865 AGAAGCTGTGATGCTTTATTTGTAGATTTCTCAATTAATGATTAACAACGATACAA 2924
Db 2688 AGAAGCTGTGATGCTTTATTTGTAGATTTCTCAATTAATGATTAACAACGATACAA 2747
Qy 2925 CATTTGAGATTTCAATGCGGACAGATTAATTTTCAATGCAATTTGAGAGGCTTATCTGTC 2984
Db 2748 CATTTGAGATTTCAATGCGGACAGATTAATTTTCAATGCAATTTGAGAGGCTTATCTTC 2807
Qy 2985 AGAATATGCTGTATCCCGGAGTGAATGCGGAAATTTTGAAGATTTGAAGTGCAT 3044
Db 2808 AGAATATGCTGTATCCCGGAGTGAATGCGGAAATTTTGAAGATTTGAAGTGCAT 2867
Qy 3045 TATCACTGCAATCTCCCTATACAGATGCAAGAAATGCTGTTAAATGATTTTATATA 3104
Db 2868 TTTCTATCGATTAATCTCTATATATGATGCAAGAAATGCTATTAATTAATGCGATTTCAATTA 2927
Qy 3105 TGAATTAAGATGTGAAATGTAAGAGGCAATGATGATGATGATGATGATGATGATGATGAT 3161
Db 2928 TGGCTTATCATGCTGGAACGTGAAGGCAATGATGATGATGATGATGATGATGATGATGAT 2987

QY 3162 TTCTGCTCTTGTATATCCAGATGGAGAGCAAGCTTCCGCTGTC 3221
 DB 2988 TTGCTGCTCTTGTATATCCAGATGGAGAGCAAGCTTCCGCTGTC 3047
 QY 3222 GGGGCGGTGCTATATCTCCGTGTCACAGCTTCAAGAGGATATGAGAGGTTGTCT 3281
 DB 3048 GGGGCGGTGCTATATCTCCGTGTCACAGCTTCAAGAGGATATGAGAGGTTGTCT 3107
 QY 3282 AACGATCCATGAAATCGAGAACATACAGACAACTTAAATTTAAATCTGTGAAGA 3341
 DB 3108 AACGATCCATGAAATCGAGAACATACAGACAACTTAAATTTAAATCTGTGAAGA 3167
 QY 3342 GGAAGGTATCCAAAGGATACAGAAAGTGTATGATATATGTCACACCAAGTACAG 3401
 DB 3168 GGAAGGTATCCAAAGGATACAGAAAGTGTATGATATATGTCACACCAAGTACAG 3227
 QY 3402 AG-----TATGTAATTCCTGCTATATGCTGATATGAGAGTATGAGAGTATGA 3449
 DB 3228 AGGATCCACAGATTCATGTAATTCCTGCTATATGAGAGTATGAGAGTATGA 3287
 QY 3450 TACTACGATCTGTATATATCAACCGACTATGAAAGAAACGTATACAGATGACG 3509
 DB 3288 TACTACGATCTGTATATATCAACCGACTATGAAAGAAACGTATACAGATGACG 3347
 QY 3510 AAGAGATATCATTTGTAATATGACAGAGGGTATGTAATTTCAACCACTACAGCTG 3569
 DB 3348 AGGAGATATCATTTGTAATATGACAGAGGGTATGTAATTTCAACCACTACAGCTG 3407
 QY 3570 TTATATGACAAAGATTAATATCTCCAGAAACCGATATGATGATGAGATG 3629
 DB 3408 TTATATGACAAAGATTAATATCTCCAGAAACCGATATGATGATGAGATG 3467
 QY 3630 AGAAGCGAAGGAGATTTATGATGACAGCGTGAATTTACTCTTATGAGAGAA 3684
 DB 3468 AGAAGCGAAGGAGATTTATGATGACAGCGTGAATTTACTCTTATGAGAGAA 3522

RESULT 12
 US-08-291-368-1
 Sequence 1, Application US/08291368
 Patent No. 5686069
 GENERAL INFORMATION:
 APPLICANT: Payne, Jewel M.
 APPLICANT: Sick, August J.
 TITLE OF INVENTION: No. 5686069el Bacillus thuringiensis Isolates
 TITLE OF INVENTION: Active Against Lepidopteran Pests
 NUMBER OF SEQUENCES: 27
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Saliwanchik & Saliwanchik
 STREET: 2421 N.W. 41st Street, Suite A-1
 CITY: Gainesville
 STATE: FL
 COUNTRY: US
 ZIP: 32606
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent In Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/291.368
 FILING DATE:
 CLASSIFICATION: 536
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 07/597,607
 FILING DATE: 15-Oct-90
 CLASSIFICATION: 536
 ATTORNEY/AGENT INFORMATION:
 NAME: Saliwanchik, David R.
 REGISTRATION NUMBER: 31,794
 REFERENCE/DOCKET NUMBER: MA50.C1
 TELECOMMUNICATION INFORMATION:

TELEPHONE: (904) 375-8100
 TELEFAX: (904) 372-5800
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 3522 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: double
 TOPOLOGY: linear
 MOLECULE TYPE: DNA (genomic)
 HYPOTHETICAL: NO
 ANTI-SENSE: NO
 ORIGINAL SOURCE:
 ORGANISM: Bacillus thuringiensis
 STRAIN: aizawa
 INDIVIDUAL ISOLATE: PS81A2
 IMMEDIATE SOURCE:
 LIBRARY: LambdaGem - 11 (tm) Library of August Sick
 CLONE: 81A2
 US-08-291-368-1

Query Match 48.6%; Score 1793.4; DB 1; Length 3522;
 Best Local Similarity 71.9%; Pred. No. 0;
 Matches 2497; Conservative 0; Mismatches 861; Indels 117; Gaps 7;

QY 228 ACAATAGCTAGCTTTTATATGATTTCTTGTGCTGAATTATGAGCCCGGCGGAGATGA 287
 DB 147 ACTAGGGGATTTTATATCTTGGCTTGTGATGTAATATGGGGCTATAGTCTTCA 206
 QY 288 GTGGGAAATTTCTTGAACATGTCGAAACATTTAATCAACAATTAACAGAAATGC 347
 DB 207 ATGGATATATTTTATGACCAATGAGCTATGATCGGCCAAAGATAGAGAAATTCG 266
 QY 348 TAGGAATACGGCACTTGTCTGATTAACAAGTTTAAAGATTCCTTTAGACCTATCA 407
 DB 267 TAGGAATACGGCAATTTTCAATTAACAAGGCTTAAGCAATCTTACCGAATTTACA 326
 QY 408 GTCACTTGAAGATGTGCTGTAAGAAACCGTATGATGTAAGAAAGAGATGCTTATAC 467
 DB 327 TGCCTTTTAAACCTGGGAAGTATCTTATCTATCCAGATTTAAGAAAGATGCGTAT 386
 QY 468 CCAATATATAGCTTATAGACTGATTTCTTATATGATGCGCTTTTGCATTTAGAA 527
 DB 387 TCAATTTATGACATGACAGATGCTCTTCAACAGATATTCCTTTTTCAGTTCAAG 446
 QY 528 CCAAGAGTTCATTAATTAATGATATGCTCAAGCTGCAATTTACACCTATTTAT 587
 DB 447 TATGAAATTCCTCTTTATCAAGTATATGTCGAAGTCAAAATTTACATTTACGGTTT 506
 QY 588 GAGAGTGCCTCTCTTTTGTGATGAAATTTGGCTTACATGCGCAGAAATTTCAAGTTA 647
 DB 507 GAGAGTGTGTTACAGTGTGGAACAAGTTGGGATTTGATGACAAACATCAATAGTGC 566
 QY 648 TTATGAGCCCAAGTGAACAACAAGATTAATTCGATATGCGTAAATGATTA 707
 DB 567 TTTATATGATTTTATACAGCTTATTTGGCAATATCTATATGCTGATGCTGATTA 626
 QY 708 TACAGCTTAAATAGCTTGAAGGACAAATGCCG---CAAGTTGGTGCCTTATATCA 764
 DB 627 TACGGGTTAAATCGTTTACACGATTAAGAGGGGATGACAGATGCGCAAGATTTATAG 686
 QY 765 ATTCCTAGAGATCTAAGCTTACGGTATTAATCTAGTGCACATTTCCCAAGCTATGA 824
 DB 687 GTTTAAGAGAGTTTAAACATATCAATATTAATTAATTTCTTTTCCAAATTAACGA 746
 QY 825 CACTGCACTTATCCATTAATACGATGCTCAGTTTAAACAAGGAGATTTATACAGACG 884
 DB 747 TTCTAGATTTATCAATTCGACAAATCTATCAATTAAGCGGAGATATATACATTC 866
 QY 885 AATTTGAGCAACAGGGGTAATATATGCAAGTATGAAATGATTAATTAATATGACCTTC 944
 DB 807 -----GGTAATTAATATTAATCAATGATTAATATGATTAATGATTAATGATTAAT 842
 QY 945 GTTTTCGCTATAGAGACTGCGGTTATCCGAAGCCCGCATCTTACTGATTTTCTAGAAC 1004

Db 843 TTTCGAGAGTATGAAAAATTCAGCTATTAGAAAGTCCCATCTTATGAGATTTCTTAATTA 902
Qy 1005 ACTTACATTTTTTATGACCTTCATCAGATGAGTGTACTAGGATATGACTTACTGGC 1064
Db 903 TATATATTATGACCTGATTTA-----ATTAGAGCCGTTCACTATTTGGGC 947
Qy 1065 GGGGACACAAATTCATCTCGCCCAATAGAGCGGATTAATACTTCACGATGGGTC 1124
Db 948 GGGGCACTGCTGTAATCTTCATCTTACCGGTAGTTCCAGATGATTAAGCTCCCTCAATA 1007
Qy 1125 TACCAATACCTTCTATTAATCCTGTAAGATTAATCATCTCTCTGAGACGTAATTTGAC 1184
Db 1008 CCGGATTAACGCAACCGCAAGCCGAGTCGAATTCCTCTAGCACTTTTCCAGGTC 1067
Qy 1185 TGAATCATGACGAGAGTGTCTTCTATG3GGGAAATTACCTTGAACCTTATTCATGGTCCC 1244
Db 1068 TATCTATTTTATAGAACATATCAGACCTTCTTCGAAAGATCCGATATATATATGCC 1127
Qy 1245 TACTGTAGATTTAATTTTATAGAAACCTCAGAAATACCTTTGAAAGGTAAGTCTTAATA 1304
Db 1128 AACATTTGGAATTAATATAGTGCAGGGG3TAGAATTCATTCACCAATATATG3TGAAGT 1187
Qy 1305 TAGTCACCCCTATGAGTCACTGGGCTTCAATTTAAAAGATTGAGAACTGAAATTAACAAC 1364
Db 1188 TCTATATAGAAAGAGAGGAAACAGTGAATCTCTTGATGAGTTCGCAATTTGA-----CGG 1241
Qy 1365 AGAAACACAGAAAGCAACCAATTTATGATCATATAGTCAATAGTATCTGCATAGAGGCT 1424
Db 1242 TGAAGATTTATAGTATGATGATATGATCATATGATTAAGTCACTTACATTAACAGAGTGT 1301
Qy 1425 CATTTCAACATCTAGGGTGCATGACAGTAATTTCTTGAACGCAACCGTATGTCAGATTCG 1484
Db 1302 ATATTAATTAATTAATTAATAGCTTGCACAACTTTGTTGACATCACTACAGTGTACTGA 1361
Qy 1485 TACAAATACCATTAAGTTCAGATGACATTAACAAATACCATTTGGTAAATCATTTCAACT 1544
Db 1362 TCGAAATATATCTATCCGATGTAAATTAACAAATACCATTTGGTAAATCATTTCCCT 1421
Qy 1545 TAAATTCAGTACCTCTGATGACAGTGGCCAGATTTACAGAGGAGATTAATTCGAGAC 1604
Db 1422 TACTTCAGGTAACCTCTGTAGTCAGAGGCCAGATTTACAGAGGAGATTAATTCGAGAC 1481
Qy 1605 TAACTTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1664
Db 1482 TAACTTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 1541
Qy 1665 GTATCCGCTGAGAGTGTGATGCTGCTTCTCAAAACATGCTCTGAGGTTACTGTCCG 1724
Db 1542 GTATCCGCTGAGAGTGTGATGCTGCTTCTCAAAACATGCTCTGAGAGTGAATGTTCG 1601
Qy 1725 AGGAGATACCTTTTATGATCAAGGATCCCTAGTACATAGTGCAGAAATGATCTTTGAC 1784
Db 1602 AGGAGATACCTTTTATGATCAAGGATCCCTAGTACATAGTGCAGAAATGATGCTTTGAC 1661
Qy 1785 ATCTCATCATTTAGATTTGACAGAAATTCCTGATGATTAAGTGCATCTGGAGTCAAC 1844
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Qy 1845 TGTCTGAAATAGTATAGTATTAATGAGGATGACAAAGCTTTCACTTTGATTAATTTGA 1904
Db 1722 TGTCTGAAATAGTATAGTATTAATGAGGATGACAAAGCTTTCACTTTGATTAATTTGA 1781
Qy 1905 ATTCATTTCAATTTACTGCAACCTTCGAAAGCAATAGATTTTGAAGGGCGCAAGGCG 1964
Db 1782 ATTTATTCAGCTTGATGACAACTTTGAAGCAATATGATTTGAAGAGAGCAAAAGGCG 1841
Qy 1965 GGTGAATGCTCTGTTTATCTAATAGAAATCCAGAGAAATGAAAACAGATGTGACAGATTA 2024
Db 1842 GGTGAATGCTCTGTTTATCTTCCATCAAAATGAGATTTAAAAACAGATGTGACAGATTA 1901
Qy 2025 TCAATTTGATCAAGTATCCAAATTTAGTGGGCTGTTTATCGAGTAATTTCTGCTTAAGTGA 2084

Db 1902 TCAATTTGATCAAGTATCCAAATTTAGTAGATTTGTTATTCGAGTAAATTTGTCTGATGA 1961
Qy 2085 AAGAGAAATTTACTTGAAGAAATGAAATATGCAAAAGCACTCAGTATGAAAGAACTT 2144
Db 1962 AAGAGAAATTTGCTCGAAGAAATGCAAAATGCAAGCACTCAGTATGAGCGGAATTT 2021
Qy 2145 ACTCGAATTCGAAATTTCACTCATCAATCAATTAAGCAACGAGTTCAATCTACTAATGA 2204
Db 2022 ACTTCGAATTCGAAATTTCAAGAGGATCAATAGGCAACAGAC----- 2064
Qy 2205 GCAATCGAATTTCACTCATCAATGAAACATCGAAACATGAGATGTGGGAAATGAGAA 2264
Db 2065 -----GTTGGCTGGAGAGGAAATGACGA 2087
Qy 2265 CATTAACATCCAGAGAGAAATGACATTAATTAAGAAATTAAGTCACTACACCGGGAC 2324
Db 2088 TATTAACATCCAGAGAGAAATGACATTAATTAAGAAATTAAGTCACTACACCGGATC 2147
Qy 2325 TTTTATGAGTGTATTCGACGATTTTATCAAAAAATGAGAGTCCGAAATTTAAAGC 2384
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Qy 2385 TTATACCTGCTACCAATTAAGAGGATTAATTAAGAAATGACATTAATTAAGATTAATTT 2444
Db 2208 CTATTAACCTTACCAATTAAGAGGATTAATTAAGAAATGACATTAATTAATTT 2267
Qy 2445 GATTCGTTATATGCGAAACATGAAACATTTGATGATTCAGAGTCCGATCCGATGAGCC 2504
Db 2268 AATTCGCTTACATGCAAAACAGAAACGTAATATGACAGATTCGAGTCTTATGAGCC 2327
Qy 2505 GCTTTCAGTTGAAAGCCCAATCGGAAGTCCGAGAACCGAATGATGCGCACCAATTT 2564
Db 2328 GCTTTCAGTGGAAAGTCCAAATGGAAGTGTGAGAACCGAATGCGTGTGCGCACACT 2387
Qy 2565 TGAATGAATTCCTGATCTAAGATTTCTCTGACAGATGAGAGAAATATGTCGATCATTC 2624
Db 2388 TGAATGAATTCCTGATCTAAGATTTCTCTGACAGATGAGAGAAATATGTCGATCATTC 2447
Qy 2625 CCATCATTTCTCTTGGATTAATGATTTGATGACAGACTGTCATGAGAAATCTAAGGCGT 2684
Db 2448 CCATCATTTCTCTTGGATTAATGATTTGATGACAGACTGTCATGAGAAATCTAAGGCGT 2507
Qy 2685 GTGGGTGATTTCAAGATTAAGACGACAGAAAGTCAATGAGAAATCTGAAATTT 2744
Db 2508 GTGGGTGATTTCAAGATTAAGACGACAGAAAGTCAATGAGAAATCTGAAATTT 2567
Qy 2745 TATTAAGAGAAACCATTAATTAAGAGACGCTGTCTGTGTGAAGAGAGAGAGAGAAA 2804
Db 2568 TATCGAAGAGAAACCATTAATTAAGAGAGACGCTGTCTGTGTGAAGAGAGAGAGAAA 2627
Qy 2805 ATGAGAGAGAAACGTGAAAACTACAAATGGAACAAACGATATATACAGAGGCA 2864
Db 2628 ATGAGAGAGAAACGTGAAAACTACAAATGGAACAAACGATATATACAGAGGCA 2687
Qy 2865 AGAAGCTGTGATGCTTTATTTGATGATTCATATATATATATATATATATATATATATAT 2924
Db 2688 AGAAGCTGTGATGCTTTATTTGATGATTCATATATATATATATATATATATATATATAT 2747
Qy 2925 CATTTGATATTTCAATGCGGACAGATTAACCTTTGATCATGCAATTCGAGGCTTATCTGTC 2984
Db 2748 CATTTGATATTTCAATGCGGACAGATTAACCTTTGATCATGCAATTCGAGGCTTATCTTC 2807
Qy 2985 AGAATTAATCTGTTATCCCGGGGTGAAATGCGGAAATTTTGAAGATTTAGAGGTCGAT 3044
Db 2808 AGAATTAATCTGTTATCCCGGGGTGAAATGCGGATTTTGAAGATTTAGAGGTCGAT 2867
Qy 3045 TATCACTGCAATCTCCCTATATAGATGAGAGAAATGTCGTTAAATATGATTTTAAATTA 3104
Db 2868 TTTCACTGCAATTTCCCTATATATATGAGAGAAATGATCATTTAAATATGCGATTTCAATTA 2927
Qy 3105 TGAATTAAGATGCTGGAATGTAAGAGGATGTAAGT--GTACACAGAGCCATCACCG 3161
Db 2928 TGGCTTATCATGCTGGAACGTGAAGGCGATGTAAGTGTAGTGAACAAACCAACACCG 2987

Qy	3162	TTCTGTCCTTGTATTCCAGATATGGGAAGCAGAACTGTCACAAAGAGTTCCGCTCTGACC	32212
Db	2988	TTCCGTCCTTGTATTCCGGAATGGGAACAGAACTGTCACAAACAAATTCGTCTCTGCC	30472
Qy	3222	GGGGCGTGGCATATCTCTCCGTGTACAGCGTACCAAGAGGATATGGAGAAGGTTGTGT	32812
Db	3048	GGGGCGTGGCATATCTCTCCGTGTACAGCGTACCAAGAGGATATGGAGAAGGTTGTGT	31072
Qy	3282	AACGATCCATGAAATCCGAAACAAATACAGAGAACTAAATTTTAAATCTGTGAAGAAGA	33412
Db	3108	AACGATCCATGAGATCGAGAACAAATACAGAGAACTAAATTTTAAATCTGTGAAGAAGA	31672
Qy	3342	GGAGTGTATCCAAACGAGATACAGGAACGTGTATATATATCTGACACCAAGGTACAGC	34012
Db	3168	GGAGTGTATCCAAACGAGATACAGGAACGTGTATATATATCTGACACCAAGGTACAGC	32272
Qy	3402	AG-----TATGTAAATCCCGTAAATGCTGGATATGAGATGAGATGAAGTTGA	34492
Db	3228	AGGATCCACAGATTCATGTAAATTCCTCGTAAATATCAGATATGAGATGATGAAGTGA	32872
Qy	3450	TACTACAGCATCTGTAAATTACAAACCGCATTTATGAAGAAGAAAGTATACAGATGTACG	35082
Db	3288	TACTACAGCATCTGTAAATTACAAACCGCATTTATGAAGAAGAAAGTATACAGATGTAC	33472
Qy	3510	AAGAGTATATCTGTGAATATGACAGAGGGGTATGTGAATATCCACACACTACAGCTGG	35692
Db	3348	AGGAGTATATCTGTGTGAATATGACAGAGGGGTATGTGAATATTCACACAGTACAGCTGG	34072
Qy	3570	TTATATGACAAAGAAATTAAGATATCTCCAGAAAACGATTAAGATGAATTTGAGATTTGG	36292
Db	3408	TTATGTGACAAAGAAATTAAGATATCTCCAGAAAACGATTAAGATGAATTTGAGATTTGG	34672
Qy	3630	AGAAACGGAAGGAAGTTATTTGTGACAGCGTGAATTAATCTCCTTAAGAGGAAG	36842
Db	3468	AGAAACGGAAGGAAGTTATTTGTGACAGCGTGAATTAATCTCCTTAAGAGGAAG	35222

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1 TELECOMMUNICATION INFORMATION:
2 TELEPHONE: (904) 375-8100
3 TELEFAX: (904) 372-5800
4 INFORMATION FOR SEQ ID NO: 1:
5 SEQUENCE CHARACTERISTICS:
6 LENGTH: 3522 base pairs
7 TYPE: nucleic acid
8 STRANDEDNESS: double
9 TOPOLOGY: linear
10 MOLECULE TYPE: DNA (genomic)
11 HYPOTHEICAL: NO
12 ANTI-SENSE: NO
13 ORIGINAL SOURCE:
14 ORGANISM: Bacillus thuringiensis
15 STRAIN: aizawai
16 INDIVIDUAL ISOLATE: PS61A2
17 IMMEDIATE SOURCE:
18 LIBRARY: Lambdagem - 11 (cm) Library of August Sick
19 CLONE: 81A2
20 US-08-962-190-1

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Query Match	48.6%;	Score 1793.4;	DB 2;	Length 3522;
Best Local Similarity	71.9%;	Pred. No. 0;		
Matches 2497;	Conservative	0;	Mismatches 861;	Indels 117;
			Gaps	7
QY	228	ACAAATGCTAGTTTTATAGTTTTCTTGTTGTGAATTATGCCCCCGCAGAGATCA	287	
DB	147	ACTAGGGGATTTTATACTGGCTGTTTGATGTAAATGCGGGGCTATAGGTCCTTACA	206	
QY	288	GTGGGAATTTTCTTAGACATGTCGAACAATTATTAATCAACAATACAGAAATGC	347	
DB	207	ATGGGATATATTTTATGACAAATTGAGCTATATATCGGCCAAAGAAATGAGAAATTGCG	266	
QY	348	TAGGAATACGGCACTGTGCTGATTAACAAGTTTAGAGATTCCTTTAGAGCCTATCACA	407	
DB	267	TAGAAATACGGCAATTTCTAGATTACAAAGGCTAAGCAATCTTTACGAAATTTACACAA	326	
QY	408	GTCACTTGAAATTTGGCTAGAAAAACGTGATGATGCAAGACGAAAGTCTTTATAC	467	
DB	327	TGCTTTTAAAACTGGGAAGTAGATCCTACTAATCCAGACTTAAGAAAGAGATGCTAT	386	
QY	468	CCATATATAGCCTTAGAAGCTGATTTTCTTAATGCGATGCGCGCTTTGCGAATTAGAA	527	
DB	387	TCAATTTAATGACATGAACAGTGTCTTTACAACAGCTATTCCTCTTTTTCAGTTCAGG	446	
QY	528	CCAAGAATTCCTATTTATATGATATATGCTCAAGCTGCAATTTTACACTATTATAT	587	
DB	447	TTATGAAATTCCTCTTTTATCAGATATATGTTCAAGCTGCAATTTACATTTATCGTTTT	506	
QY	588	GAGAGATGCTCTCTTTTGGTAGTGAATTTGGGCTTACATCGCAGAAATTCACGTTA	647	
DB	507	GAGAGATGTTCACTGTTTGGCAACAAGTGGGGATTTGATGAGCAACAATCAATAGTCG	566	
QY	648	TTATGAGCGCCAAATGGAACAAACGAGATTTATTCGACTATGCGGTAAATGTTATPA	707	
DB	567	TTAATATGATTTAATCTAGGCTTATTTGGGAATTAATGATTAATGCTGACGTTGGTATPA	626	
QY	708	TACAGGTCTAAATAGCTTGAGAGGGAACAATGCGG---CAAGTTGGGTGCTTAAATCA	764	
DB	627	TACGGGGTAAATGCTTTACACGTAATGAAGGGGTACGAGATGCGCAAGATTTAAATG	686	
QY	765	ATTCCGTAGAGATCTAAAGTTAGGGGATTTATGATCTAGTGGCACTATTTCCAAAGCTATGA	824	
DB	687	GTTTAAAGAGAGTTAACAAATATCAGATTTAGATATTATTTCTTTTTCAAAATTTACGA	746	
QY	825	CACTCGCACTTATCCATTAATACAGAGTCTCAGTTAACAGGGAAGTTTATACGACGC	884	
DB	747	TTCTAGATTAATCCAAATTCGACAAATCTATCAATTAAACGGGGGAAGTATATACGATCC	806	
QY	885	AATTGAGCAACAGGGGTAATATGCGCAAGTGAATGTTATATAATTAATGACCTTTC	944	
DB	807	-----GGTAAATTAATTAATCAGATTTATAGAGTTACCCCAAG	842	

Qy 945 GTTTCGGCTATAGACGTGGGTTATCCGAAGCCCGCATCTACTGATTTTCTAGACA 1004
Db 843 TTTCGAGAGATTTGAAAAATTCAGCTATTAGAAAGTCCCATCTTTATGATTTTCTTAATAA 902
Qy 1005 ACTTACAAATTTTATGACCTTCACTCAGATGAGTGTACTAGGACATATGACTTCTGCGC 1064
Db 903 TATATATTTATGACATCTGATTTA-----ATTAGAGCGTTCACTATTTGGC 947
Qy 1065 GGGGCAACAATTCATCTCGGCAATAGAGCGGATTAATACTCAACGCAATGGGTC 1124
Db 948 GGGGCAATCGTGAATCTTCACTTTTACCGGATGTTCCAGATGATTAAGTCCCTCAATA 1007
Qy 1125 TACCAATCTCTTATTAATCTGTAGATTAATCACTTCTCTCGAAGCTATATTTGAC 1184
Db 1008 CGGGAATTAATCGCAACGCAAGCCGATCGAATATGCTCTTAGCACTTTTCCAGGTC 1067
Qy 1185 TGAATCATATGACGAGTGTCTTATAGGAGAAATTTACCTTGAACCTTATCAATGGTCCC 1244
Db 1068 TAACTATTTTATTAAGAACATCTATCAGACCTTTCTTCGAAGATCCGATATATTTATGCC 1127
Qy 1245 TACTGTAGATTTAATTTTATAGAACCTTCAGAAATCTTTGAAAGAGTACTGCTAACTA 1304
Db 1128 AACATTAGAAATTAATGATAGGAGGGGTAAGATTCATTCAACCAATATATGTTAGT 1187
Qy 1305 TACTCAACCTTATGATGACCTGGGCTTCAATTAANAATTCAGAAATCTGAATTAACA 1364
Db 1188 TCTATATAGAAAGAGAGAAACAGTAGATCTCTTGATGAGTGGCAATTTGA-----CGG 1241
Qy 1365 AGAAACAAGAAAGCAACCAATTAATGATCATATAGCTATAGTTATCTCAATAGGGCT 1424
Db 1242 TGAAGATTTCAATTGTTGATATAGTCAATGATTAAGTACGTTACATTAACCAAGTGTCT 1301
Qy 1425 CATTTCAACAATCTAGGGTGAATGATACAGTATATTTCTTGACGCAACCGTATGACATCG 1484
Db 1302 ATATATATCAATATATATACAGTCTTCCCAATTTGTTTGACATCAAGTGTACTGA 1361
Qy 1485 TACAATATCAATATGATTCAGATGACATCAACAATCAATGGTAAATTCATCAACT 1544
Db 1362 TCCAAATATATATCTATCCGATGTAAATTAACAATATCAATGGTAAATCACTTCCCT 1421
Qy 1545 TAATTCAGTACCTGTAGTCAAGTGGCCAGATTTACAGAGAGGGAATTAATCCGAAAC 1604
Db 1422 TACTTCAGGATCTCTGTAGTCAGAGGCCAGATTTACAGAGAGGGAATTCATCCGAAAC 1481
Qy 1605 TAAAGTAAATGATAGTATCAATGATAGTGTCTTAATTTAATATATCATCATTAACAGC 1664
Db 1482 TAAAGTAAATGATAGTATCAATGATAGTGTCTTAATTTAATATATCATCATTAACAGC 1561
Qy 1665 GATTCGGGTGAGAGTCTGTTATGCTGCTTCAAAACAATGCTCTGAAGGTTAACTGTCCG 1724
Db 1542 GATTCGGGTGAGAGTCTGTTATGCTGCTTCAAAACAATGCTCTGAAGGTTAACTGTCCG 1601
Qy 1725 AGGAGTATCACTTTTATGATCAAGATTCCTTAGTATCAATGATAGTGTCAATGACTTTTAC 1784
Db 1602 AGGAGTATCACTTTTATGATCAAGATTCCTTAGTATCAATGATAGTGTCAATGACTTTTAC 1661
Qy 1785 ATCTCAATCAATTTATGATTTGCAAAATTTCTGTAGTATATAGTATGATCTGCAAGTCAAC 1844
Db 1662 ATCTCAATCAATTTATGATTTGCAAAATTTCTGTAGTATATAGTATGATCTGCAAGTCAAC 1721
Qy 1845 TGTGTGAATAGATATAGATATATAGCAGTAGACAAACGTTTCACTTTGATTAATTTGA 1904
Db 1722 TGTGTGAATAGATATAGATATATAGCAGTAGACAAACGTTTCACTTTGATTAATTTGA 1781
Qy 1905 ATTCATTTCCAAATATCTGCAACCTTCCAGACGAATAGATTTTGAAGAGGCGCAAGAGC 1964
Db 1782 ATTTATTTCCAGTTGATGCAACATTTGAGAGATATAGATTTTGAAGAGAGCACAAAAGGC 1841
Qy 1965 GGTGAATGCTGTTTATTAATAAGAAATCCAAAGAAATGAAAAAGATGACAGATTA 2024
Db 1842 GGTGAATGCTGTTTATTAATAAGAAATCCAAATGAGATTTAAAAAGATGACAGATTA 1901
Qy 2025 TCATATGATCAAGATATCAATTTATGAGCGGTGTTATCGAGTGAATTCGCTTAATGA 2084

Db 1902 TCATATGATCAAGATATCAATTTATGAGATTTGTTATCCGATGAATTTGTCTGAGAGA 1961
Qy 2085 AAAGAGAAATTTACTAGAAAGTGAATATGCAAAAGCACTCAGTATGAAGAAATCTT 2144
Db 1962 AAAGAGAAATTTGCGAGAAAGTCAAAATGCAATGCAAGCACTCAGTATGAGCGAAATTT 2021
Qy 2145 ACTCGAATATCAAACTTCAATTCATCAATTAAGCAACAGACTTCAATCTAATTTGA 2204
Db 2022 ACTTCAAGATCAAACTTCAAGAGGATCAATAGCAACAGAC----- 2064
Qy 2205 GCAATCAATTTCAATCTATCCATGAACAACTGAAACATGAGATGTTGGGGAAGTGAA 2264
Db 2065 -----CGTGGCTGAGAGAGAGATGACGA 2087
Qy 2265 CATTAATTCAGAGAAATATGACGATTTTAAAGAAATTAAGTCACTACCGGGGAC 2324
Db 2088 TATTTCAATCCAGAGAGAGATGACGATTTCAAAAGAAATTAAGTCACTACCGGTTAC 2147
Qy 2325 TTTTATGAGTGTATTCGACGATTTTATATCAAAAAATAGAGAGTCCGAATTTAAAGC 2384
Db 2148 CTTTGAATGAGTGTATCCAACTATTTGTATCAAAAAATAGATGATCGAAATTTAAAGC 2207
Qy 2385 TTATATCTGCTACCAATTAAGAGGATATTTGAAGATATGATGATTTAGATATATTT 2444
Db 2208 CTATTAACCTTTACCAATTAAGAGGATATTCGAAGATGATCAAGATTTAGAAATCTATTT 2267
Qy 2445 GATTCGTTATATGCGAAACATGAAACATTTGATTCGAGTTCGAGTCCGATGCGATAGGCC 2504
Db 2268 AATTCGTTACAAAGCAAAACGAAACGTAATATGACAGATGCGGATTCCTATAGGCC 2327
Qy 2505 GCTTTCAGTTGAAAGCCCAATTCGAAAGTCCGAGAACCGAATCGATGCGCACCACTTT 2564
Db 2328 GCTTTCAGTGAAGATCAATTTGAAAGTGTGAGAGAACCGAATCGGATGTCACACCT 2387
Qy 2565 TGAATGAATCTGATTTAATGTTCTCTGCAAGATGAGAGAAATGTCGCACTTTC 2624
Db 2388 TGAATGAATCTGATTTAATGTTCTCTGCAAGATGAGAGAGGAGAAATGTCGCACTTTC 2447
Qy 2625 CCAATTTCTCTTGTGATTTGATTTGATGACAGACTGTCATGATGATCTAAGGCGT 2684
Db 2448 CCAATTTCTCTTGTGATTTGATTTGATGATGACAGACTGTCATGATGATCTAAGGCGT 2507
Qy 2685 GTGGGTGATTTCAAGATTTAAGACGCAAGAGTCAATCAAGATCTGAAATTT 2744
Db 2508 GTGGGTGATTTCAAGATTTAAGACGCAAGAGTCAATCAAGATTTAAGAAATCTGAAATTT 2567
Qy 2745 TATTTGAAGAAACCAATTTATGAGAGACATGTCGTCTGTGTGAAGAGACAGAGAAAA 2804
Db 2568 TATTTGAAGAAACCAATTTATGAGAGACATGTCGTCTGTGTGAAGAGACAGAGAAAA 2627
Qy 2805 ATGAGAGAAACCGTGAATACTCAATTTGAAACAAACGATATATCAAGAGGCA 2864
Db 2628 ATGAGAGAAACCGGGAATACTCAATTTGAAACAAACGATATATCAAGAGGCA 2667
Qy 2865 AGAAGCTGTGATGCTTTATTTGATGATTTCAATATATATAGATTAACAAGGATTA 2924
Db 2688 AGAAGCTGTGATGCTTTATTTGATGATTTCTCAATATATATAGATTAACAAGGATTA 2747
Qy 2925 CATTTGATGATTCATGCGGCAATTAACCTTTGATGATTCATGATTCAGAGGCTTATCTGTC 2984
Db 2748 CATTTGATGATTCATGCGGCAATTAACCTTTGATGATTCATGATTCAGAGGCTTATCTGTC 2807
Qy 2985 AGAATATCTGTTATCTCCGGGTGAATTTGCGGAAATTTTGAAGAAATTAAGAGTCCAT 3044
Db 2808 AGAATATCTGTTATCTCCGGGTGAATTTGCGGAAATTTTGAAGAAATTAAGAAACGCTAT 2867
Qy 3045 TATCACTGCAATCTCCCTATATAGATGCGAGAAATGCTTAAAAATGCTATTTAATAA 3104
Db 2868 TTCTACTGCAATCTCCCTATATATAGATGCGAGAAATGCTATTTAAATGCGATTTCAATA 2927
Qy 3105 TGAATTTGATGCTGGAATGTAAGAGGATGAT--GTAACAAGACATCAACG 3161

QY	885	AATTGGACGAACAGGGGTTAAATATGCGACATATGAAATGGATTAATATATATGACCTTC	944
Db	807	-----GGTAATTAATATACGATTAATAGATTACCCCAAG	842
QY	945	GTTTTCCGCTATAGAGACTCGGGTTATCCGAAGCCCGATCTACTGTAATTTCTAGACA	1007
Db	843	TTTCGAGGATATGAAAAATTCAGCTAATAGAAAGTCCCACTTAATGAAATTTCTTAATTA	902
QY	1005	ACTTACAATTTTTTAGCACTTCACAGATGAGTGGCTACTAGGACATATACACTTACGGCG	1067
Db	903	TATATATTATGACACTGATTTA-----ATTAGAGCGCTTCACTATTTGGCG	947
QY	1065	GGGGCACAACAATTCAATCTCGGCCAATAGAGCGGATTTAAATACCTCAACGCAATGGGTC	1122
Db	948	GGGGCATGCTGTAACTTCTCATTTTACGGGTAGTTCCGAAATGATTAAGCTCCCTCAATA	1007
QY	1125	TACCAATATCTTATTAATCCCTGTAAGATTAATCATTTCTTCTCGAAGCTATATTGAC	1188
Db	1008	CGGGTAATCTGMAACGACGAACCGAAGTCGAATATGCTCTTACCACTTTTCCAGGCT	1067
QY	1185	TGAATCATATGACAGAGTGGCTCTATGAGGGAATTTACCTTGAAACCTAATCATGATGGCC	1244
Db	1068	TAACTATATTTATAGAACATATCAAGACCTTTCTTCGAAAGATCGAATATTTATATGC	1122
QY	1245	TACTGTTAGATTTAATTTTAGGAACCTCAGAAATACCTTTGAAAGGTAAGCTCTAATA	1304
Db	1128	AACATTAGAATTAATATGATAGTCAAGGGGATAGATTCAATCAACAAATTAATGTAAGT	1187
QY	1305	TAGTCAACCCATATGATGACCTGGGCTTCAATTTAAAGTTCAAAATCTGAATTAACAC	1366
Db	1188	TCATATATGAAAGAGAGAACAGTGAATTCCTTATGATGTTGCCMAATTA-----CGG	1244
QY	1365	AGAAACAACAGAACGACCAATTAATGAATCATATAGTACATAGGTTATCTACATAGGGCT	1422
Db	1242	TGAGAAATTCATTTAGTTGGATATAGTCAATAGATTAAATGACACGTTAATTAACAGGCT	1307
QY	1425	CATTTCACAAATCTAGGAGTGCATGTACAGATATATCTTGACGCAACGATGTCAGATCG	1484
Db	1302	ATATATACTAATATATACTAGCTGGCCAACTTTCTTTGGACATATCAAGTGTACTGTA	1366
QY	1485	TACAAATATCACTTAGTTCAATAGATAGATTAACAAATACCATTTGGTAAATCATCAACT	1544
Db	1362	TCGAATTAATTAATCTATCCGAGATGTAAATTAACAAATACATTTGGTAAATCATCTCCCT	1422
QY	1545	TAAATTCAGGTAACCTGTAGTCAAGTGGCCAGGATTTACAGAGGGGATTTATATCCGAAC	1604
Db	1422	TACTTCAGGTAACCTGTAGTCAAGTGGCCAGGATTTACAGAGGGGATTTATATCCGAAC	1483
QY	1605	TAACTTAATGATGATGTAATAGATAGGATCTTAATTTTAATTAATCAATCAATCAACG	1664
Db	1482	TAACTTAATGATGATGTAATAGATAGGATCTTAATTTTAATTAATCAATCAATCAACG	1544
QY	1665	GTAATCGCTGAGAGTTCGTTATGCTGCTTCAAACAATGCTCTGAGGGTAACTGTGCG	1722
Db	1542	GTATCCGCTGAGAGTTCGTTATGCTGCTTCAAACAATGCTCAAGAGTAAATGTTGG	1604
QY	1725	AGGAGATATCTATTTTGATCAAGATCCCTAGTACTATAGATGCAATATGAGTCTTTGAC	1788
Db	1602	AGGAGATATCTATTTTGATCAAGATCCCTAGTACTATAGATGCAATATGAGTCTTTGAC	1664
QY	1785	ATCTCAATCATTTAGATTGCAGAATTTCTGTAGTATTAATGTCATCTGGACATCAAC	1844
Db	1662	ATCTCAATCATTTAGATTGCAGAATTTCTGTAGGCAATTAATCAATCTGGACATCAAC	1722
QY	1845	TGCTGGAATAGTATAGTAATATATGACAGTGAACAACGTTTCACTTGAATTAATGA	1904
Db	1722	TGCTGGAATAGTATAGTAATATATATGACAGTGAACAACGTTTCACTTGAATTAATGA	1788
QY	1905	ATTCATTCATTTACTGCAACCTTCGAAGCAAAATGCAATTTGAATAAGCGCGCAAGAGC	1966
Db	1782	ATTCATTCATTTACTGCAACCTTCGAAGCAAAATGCAATTTGAATAAGCGCGCAAGAGC	1844
QY	1965	GGTAAATGCTCTGTTTACTAATATAGCAATCCCAAGATTTGAATAAGATGTGACAGATT	2022

Db	1842	GGTGAATTCGGCTGTTTACTCTCCAAATCGAATCGATTAAACACAGATGACGGATTA	1901
OY	2025	TCATATTGATCGAAGATCCAAATTTAGTGGCGGTGTTATCCGATGAATTCCTGCTTAGATGA	2084
Db	1902	TCATATTGATCGAAGATCCAAATTTAGTGGGTGTTATCCGATGAATTTGTCGGAAGA	1961
OY	2085	AAAGAGAAATTAAGTGAAGAAAGTGAATATGCGAAACGACTCAGTGTGAAGAAACCTT	2144
Db	1962	AAAGGAGAAATTTGTCGGAAGAAAGTCAACATGCGAAGGACTCAGTGTGAAGCGGAATTT	2021
OY	2145	ACTCCAGATCCAACTTCACATCCATCAATAGCAACGACGTTCAATCTACTAATGA	2204
Db	2022	ACTTCAAGATCCAACTTCAGAGGATCAATAGCAACGAC-----	2064
OY	2205	GCAATCGAATTCACATCTATCCATGAAACAATCTGAAACATGGAATGTCGGGAATGAGAA	2264
Db	2065	-----GTCGGCTGGAGAGGAATACCGA	2087
OY	2265	CATTACATCCAGAGAAAGAAATGACGTATTTAAAGAAATTAACGTCACTACCGGGGAC	2324
Db	2088	TATTTCCATCCAGAGAGAGATGACGTATTTAAAGAAATTAACGTCACTACCGAGTAC	2147
OY	2325	TTTTAATGAGTGTATCCGACGTATTTATCAAAAAATAGAGAGTCCGAATTTAAAGC	2384
Db	2148	CTTTGATGAGTGTATCCAGATTTTGTTGATCAAAAAATAGATGAGTCCGAATTTAAAGC	2207
OY	2385	TTATATCTGCTACCAATTAAGAGGATATTTGAAGATATGTCACAAATTTAGAGATATATT	2444
Db	2208	CTATATACCGTTACCAATTTAAGAGGATATTTGAAGATATGTCACAAATTTAGAGATATATT	2267
OY	2445	GATTCGTTATTAATGCGAAACATGAAACATTTGATGTTCCAGGTACCGAGTCCGATGAGCC	2504
Db	2268	AATTCGCTACATGCAAAACGAAACAGTAAATGTACAGGTACCGGTTCTTATGGCC	2327
OY	2505	GCTTTCAGTTGAAAGCCCAATCGAAGGTGCGGAAACCGAATGATGCGCACCAATTT	2564
Db	2328	GCTTTCAGTGAAGTCCAAATTTGAAGGTGTGGAAACCGAATGCGGTGTGGCACACCT	2387
OY	2565	TGAATGGAATCTGTATCTAGTTGTTCTCTGACAGATGAGAGAAATATGTCCGATCTTC	2624
Db	2388	TGAATGGAATCTGTATTTAGATTTGTTCTCTGACAGAGCGGGGAAATATGTGCACTCATTC	2447
OY	2625	CCATCATTTCTCTTGATTTGATTTGATGACAGCTGTGATAGATGAATCTAAGCGT	2684
Db	2448	CCATCATTTCTCTTGACATTGATTTGATGACAGCTGTGACAGAGATCTAAGCGT	2507
OY	2685	GTGGGTGTATTCAGATTTAAGACGACAGAAAGTCATGCAAGCTAGAGAACTTGAATTT	2744
Db	2508	GTGGGTGTATTCAGATTTAAGACGACAGAAAGTCATGCAAGCTAGAGAAATCTGGAATTT	2567
OY	2745	TATTTGAAGAAACCATTTATTAGAGAGACCTGTCTCTGTGTGAAGACAGAGAAAA	2804
Db	2568	TATTTGAAGAGAAACCATTTATTAGAGAGACCTGTCTGTGTGAAGACAGAGAAAA	2627
OY	2805	ATGAGAGAGCAAAAGTGAAGAACTCAATTTGGAACAAACGAGTATTTACAGGGCAAA	2864
Db	2628	ATGAGAGAGCAAAAGTGAAGAACTCAATTTGGAACAAACGAGTATTTACAGGGCAAA	2687
OY	2865	AGAAGCTGTGANTCTTTATTTGTAGATTTCTCATATPATATGATTACAGCGGATCAAA	2924
Db	2688	AGAAGCTGTGANTCTTTATTTGTAGATTTCTCATATPATATGATTACAGCGGATCAAA	2747
OY	2925	CATTGCAATGATTCATGCGCAGATTAACCTTTGTCATGCAATTCGAGAGGCTTATCTGTC	2984
Db	2748	CATTGCAATGATTCATGCGCAGATTAACCTTTGTCATGCAATTCGAGAGGCTTATCTTCC	2807
OY	2985	AGATTTATCTGTTATCCCGGTGTAAATGCGGAATTTTGAAGAAATTAAGAGTCCCAT	3044
Db	2808	AGATTTATCTTCAATTCAGAGAAATTAATGTGTATTTTGAAGAAATTAAGAAACGTAT	2867
OY	3045	TATCACGCAATCTCCCTATACGATGCGAGAAATGTGTTAAAAATGTGATTTTAAATTA	3104

Db	2868	TTCTACAGTCATTTATCCGTAATATGATGGAGAAATGTCAATTAAATAATGGCATTTCAATPA	2927
Qy	3105	TGATTTAGCATGCTGGAAATGTTPAAAAGGCATGTAGAT---GTACAACAAGCCATCAACG	3161
Db	2928	TGGCTTTATCATGCTGGAAACGTGAAAGGGCAGATGTAGATATAGTAGMAACAAAACAACACCG	2987
Qy	3162	TTCTGTCCTTGTATATCCAGATATGGGAAGCAAGATGTCACAAGCAGTTCGCGTCTGCC	3221
Db	2988	TTTCGCTCTTTGTTCCTCCGGAATGGGAAGCAGAGTGTCACAACAAATTCGTCTCTGCC	3047
Qy	3222	GGGGCGTGGCTATATCCCTCCGTCACACGCTACAAAGAGGATATGAGAAGGTTGTGT	3281b
Db	3048	GGGGCGTGGCTATATCCTCCGTCATACAGCGTACAAAGAGGATATGAGAAGGTTGTGT	3107
Qy	3282	AACGATCCATGAATTCGAGAACATATACAGACGAACATAAATTTTAAAACTGTGAAGAAGA	3341b
Db	3108	AACCATCCATGAGATCGAGAAACAATACAGAGMACTTAAATTTTAAAACTGTGAAGAAGA	3167
Qy	3342	GAAGATGATCCAAACGGAATACAGGAACGTGTATATATCTGACACCAAGGATACAGC	3401b
Db	3168	GAAGATGATCCAAACGGAATACAGGAACGTGTATATATCTGACACCAAGGATACAGC	3222
Qy	3402	AG-----TATGTAATTCCTCCGTAATGCTGGATATGAGATGACATGGAAGTTGA	3449
Db	3228	AGGATCCACAGATTCATGTAAATTCCTCGTAATATCAGATATGAGATGCATATGAAATGAA	3287
Qy	3450	TACTACAGCATCTGTTAATTACAAACCGACTTATAGAAAGAAACGTATACAGATGTACG	3508b
Db	3288	TACTACAGCATCTGTTAATTACAAACCGACTTATACAAAGAAAGTATACAGATGTACA	3347
Qy	3510	AAGAGATTAATCATTTGTGAATATGACAGAGGGGATGTGAATTATCCACACACTACACGCTGG	3569
Db	3348	AGGAGATTAATCATTTGTGAATATGACAGAGGGGATGTGAATTATGACACAGTACCAAGCTGG	3407b
Qy	3570	TTATATGACAAAAGATTAGATATCTCCAGAAAACGATAGAGTATGAGATTGAGATTGG	3629
Db	3408	TTATGTGACAAAAGATTAGATATCTCCAGAAAACGATAGAGTATGAGATTGAGATTGG	3467
Qy	3630	AGAAACGGAACGGAGTTTATTTGTAGACAGCTGGAATTACTCCCTTATGAGAGGA	3684
Db	3468	AGAAACGGAACGGAGTTTATTTGTAGACAACTGCAAATTACTCCCTTATGAGAGGA	3522

RESULT 15
5164180-3
; Patent No. 5164180
; APPLICANT: PAYNE, Jewel, August J.
; TITLE OF INVENTION: BACILLUS THURINGIENSIS ISOLATES ACTIVE
; AGAINST LEPIDOTERAN PESTS
; NUMBER OF SEQUENCES: 6
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/451,389
; FILING DATE: 14-DEC-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 353,860
; FILING DATE: 18-MAY-1989
; SEQ ID NO.:3
; LENGTH: 3522
; 5164180-3

Query Match	48.6%;	Score 1791.8;	DB 6;	Length 3522;
Best Local Similarity	71.8%;	Pred. No. 0;		
Matches 2496;	Conservative	0;	Mismatches 862;	Indels 117;
				Gaps 7;

Oy	228	ACAATACCTAGTTTATTTTATGTTTCTGTGGTGAATTAATGAGCCCGGACAGATCA	287
Db	147	ACTAGGGGATTTTATACCTTGCTGTGGATGTAATATGGGGGGCTATAGGTCCTTACA	206
Oy	288	GTGGGAATTTTCTCTAGAACATGTGGAACTTTAAATCAACAATTAACAGAAAATGC	347
Db	207	ATGGGATATATTTTATAGGCAAAATTAGCTATTTGATCGCCCAAGAAATTAAGGAAATTCGC	266
Oy	348	TAGAAATACGGCATCTGTCATTAACAAGTTTATAGAGATTCCTTTAGAGCCTATCAAC	407

Db	267	TAGGATTCAGGGCAATTTCTAGATTTCAGAGGGCTAGACATCTTTACCGAATTTACACAA	326
Qy	408	GTCACTTAAGATTGGCTTAGAAAACCGTGATGATGACAGAACGAAAGTGTTCTTTATAC	467
Db	327	TGCTTTTAAAACTGGGAAGTAGATCCCTACTACTATCCAGCATTTAAGAAAGAGATGCGTAT	386
Qy	468	CCAAATATATAGCTTAGAAGCTTGATTTTCTTAAATGCGATCCGCTTTGGCAATTAGAA	527
Db	387	TCAATTTATATGACATGAACAGTGCTCTTACCAACGATATCTCTTTTTCAGTTCAAGG	446
Qy	528	CCAAAGATGCCATATTATATGATGTATGCTCAAGCTGCAAAATTTCACCTATTAATAT	587
Db	447	TTATGAATTCCTCTTTTATCAGTATATGTTTCAAGCTGCAAAATTTCATTTATCGGTTT	506
Qy	588	GAGAGATGCTCTCTTTTGGTAGTGAATTTGGGCTTACATCGCAGAAATTCACGTTA	647
Db	507	GAGAGATGTTTCAGTGTTTGACCAACGTTGGGATTTGATGTGCAACAAATCAATAGTCG	566
Qy	648	TTATAGAGCCCAAGTGGAACAAACGAGATTAATTCGACTATTTGGGTAGAAATGATTA	707
Db	567	TTATATGATATTTAAGCTTAGGCTTATTTGGCCAAATATCTGATTTAGCTGTACGTTGGATTA	626
Qy	708	TACAGGCTCAATAGCTTGAGAGGGCAAAATGCG--CAAGTTGGGTGGTATATATCA	764
Db	627	TACGGGGTTAAATCGTTTACACGTAATGAAAGGGGTACAGAGATGGCAAGATTTATATAG	686
Qy	765	ATTCGGTAGAGATCTTAACGTTAAGGGGTATTTAGATCTAGTGGCACTATTTCCCAAGTATGA	824
Db	687	GTTTAGAAGAGGTTTAAACATATCAGTATTTAGATTTATTTCTTTTCCAAATATACGA	746
Qy	825	CAGTCGCACTTATCCAAATTAATCGAGTGCTCAGTTTACAGAGGAAATTATACAGCGC	884
Db	747	TTCTATGATTAATCCAAATTTCCGACATCTATCAATTTAAGCGGGAAATATACAGATCC	806
Qy	885	AATTGAGCAACAGGGGTAAATATGSCAAATGATGATGTGTAATTAATATGACACTTC	944
Db	807	-----GATATTTATATACGATTTATAGATTACCCCAAG	842
Qy	945	GTTTTCCGCTATAGAGACTGCGGTTATCCGAACCCGCACTTACTGATTTTCTAGACA	1004
Db	843	TTTGGAGGTAATGGAATAATCAGCTATTAGAAATGCCCATCTTAATGATTTCTTAAATTA	902
Qy	1005	ACTTACAAATTTTACCACTTATCACAGATGAGTGCTACTAGSCAATATGACTTACTGCGC	1064
Db	903	TATATATTTTGCACCTGATTTA-----ATTAGAGGGCTTCACATTAATGGGC	947
Qy	1065	GGGGGACAAATTCATCTCGGGCCAAATAGAGGCGGATTAATTAATCTCAACGATGGGTC	1124
Db	948	GGGGGATCGTGAACCTTCATCTTATACCGGTAGTTGCAAGTATAGCTCCCTCATATA	1007
Qy	1125	TACCAATATCTTCTATTTAACTCTGTAAAGATTATTCATCTTCTCGACAGCTATATTTGGAC	1184
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Qy	1185	TGAATCATATGACGAGAGTGCTCTTATGGGAAATTAACCTTGAACCTTATTCAGTGTCCTC	1244
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Db	1128	AACATTAGAAATTAATGTAGTCAAGGGGTAGAGATTCATTCAACCAAAATATAGTGAAGT	1187
Qy	1305	TAGTCAACCCATATGATGTCACCTGGGCTTCAATTTAAAGATTGCAAACTGAATTAACACC	1364
Db	1188	TCTATATATGAAAGAGAGACAGTATGATCTCTGTATGAGTTGCCAATTTA-----CGG	1241
Qy	1365	AGAAACAAACAGACGACCAATTTATGAAATCATATAGTCAATAGGTTATCTCATAAGGGCT	1424
Db	1242	TGAGATTCATTAGTTGATATAGTCAATGATTAATGATCAAGTTACATTAACAGAGTGCTT	1301
Qy	1425	CATTTCAATCTAGGGTGCATGTACAGTATATTTCTTGAAGGCAACCGTATGTGCATATCG	1484

Dp	1302	ATATATACTAATATATATACCTAGCTGGCCAACTTTGTTTGGACACATCACTGACTCTGTA	1361
Oy	1485	TACAAATACCAATTAGTTCAGATAGCATTAACAACAATACCATTTGGTAAATCATTTCAACCT	1544
Dp	1362	TGAAATATATATCTATCCGGATGTATATACCAAAATACCATTTGGTAAATCATTTCTCCCT	1421
Oy	1545	TAAATTGAGTACCTCTGTAGTCACTGGCCACAGATTTACAGAGGGGATATATCCGAC	1604
Dp	1422	TACTTCAGGTACCTCTGTAGTCAAGGCCCCAGAGATTTACAGAGGGGATATCATCCGAC	1481
Oy	1605	TACGTTAAATGGTAGTGTACTAAGATAGGGGCTTAAATTTTAAATATACATATACAGCG	1664
Dp	1482	TACGTTAAATGGTAGTGTACTAAGATAGGGGCTTAAATTTTAAATATACATATACAGCG	1541
Oy	1665	GTATCCGCTGAGAGTTCCGTATGCTGCTTCCAAACAATGGTCCGAGGGTAACTGTCCG	1724
Dp	1542	GTATCCGCTGAGAGTTCCGTATGCTGCTTCCAAACAATGGTCCGAGGGTAACTGTCCG	1601
Oy	1725	AGGAGTATCTACTTTTGTATCAAGATTCCTTAGTATATAGATGCAATGAGTCTTTGAC	1784
Dp	1602	AGGAGTATCTACTTTTGTATCAAGATTCCTTAGTATATAGATGCAATGAGTCTTTGAC	1661
Oy	1785	ATCTCAATCATTTTGAATTTTGCGAATTTCCGTAGATTTAGTCAATCTGGCACTCAAC	1844
Dp	1662	ATCTCAATCATTTTGAATTTTGCGAATTTCCGTAGATTTAGTCAATCTGGCACTCAAC	1721
Oy	1845	TGCTGGAATAAGTATTAAGTAAATATGACAGTAGACAAACGTTTCACTTGTATTAATTTGA	1904
Dp	1722	TGCTGGAATAAGTATTAAGTAAATATGACAGTAGACAAACGTTTCACTTGTATTAATTTGA	1781
Oy	1905	ATTCAATTCGAATTACTGCAACCTTCCAGACGAATACGATTTTAGAAGGGCGCAAGAGCG	1964
Dp	1782	ATTCAATTCGAATTACTGCAACCTTCCAGACGAATACGATTTTAGAAGGGCGCAAGAGCG	1841
Oy	1965	GGTGAATGCTGTGTTTACTATACGAATCCAGAAGATTGAAAACAGATGTGACAGATTA	2024
Dp	1842	GGTGAATGCTGTGTTTACTATACGAATCCAGAAGATTGAAAACAGATGTGACAGATTA	1901
Oy	2025	TCATATTGATCAAGATATCCAAATTTTAGTGGCGTGTTTATCCGATGAATTCGCTTAGATGA	2084
Dp	1902	TCATATTGATCAAGATATCCAAATTTTAGTGGCGTGTTTATCCGATGAATTTTGTCTGATGA	1961
Oy	2085	AAAGAGAAATTACTTGAGAAAGTGAATATGCGAAAACGACTCAGTATGTAAGAAACTT	2144
Dp	1962	AAAGCGAATATGTCGAGAAAGTCAACATGCGAAGGACTCAGTATGTAAGCGGAATTT	2021
Oy	2145	ACTCCAGATCCAAACTTCACTCATCATATAGCAACCGACCTTCATATCTACTAATGA	2204
Dp	2022	ACTCCAGATCCAAACTTCACTCATCATATAGCAACCGACCTTCATATCTACTAATGA	2064
Oy	2205	GCAATCGAATTTCATCTATTCATGAAACATCTGAAACATGAGATGGTGGGGAATGGA	2264
Dp	2065	-----CGTGGCTGGAGAGGAATACGA	2087
Oy	2265	CATTACATCCAGAGAAATGACGATATTTAAAGAAATTAACCTCACTACCGGGGAC	2324
Dp	2088	TATTAACATCCAGAGAGGAGATGACGATTTCAAAGAAATTAACCTCACTACCGAGTAC	2147
Oy	2325	TTTTTAATGAGTGTATCCGACGATTTTATATCAAAAAATAGAGAGTCCGAAATTTAAAGC	2384
Dp	2148	CTTTGATGAGTGTATCCGACGATTTTATATCAAAAAATAGATGATGTCGAAATTTAAAGC	2207
Oy	2385	TTATATCCGATCAAAATTAAGAGGGGTATTTGGAAGATATGTCACAAATTTAGAGATATTTT	2444
Dp	2208	CTATTAACCGTTACCAATTTAAAGGGGTATTTGGAAGATATGTCACAAATTTAGAGATATTTT	2267
Oy	2445	GATTCGTTATATATGCGAAACATGAAACAATGAGATGTTCCAGGTACCGAGTCCGATGGCC	2504
Dp	2268	AATTCGCTCAATGCGAAACACGAAACAGTAAATATGTCAGAGTACGGGTTCTTATGGCC	2327
Oy	2505	GCTTTCAGTTGAAAGCCCATCCGAGGGTCCGAGAAACCGAATGATGCGCACCAATTT	2564
Dp	2328	GCTTTCAGTCCAAAGTCCAAATTTGGAAGGTGTGGAACCCGATCCGATGTGCGACACCT	2387

QY	2565	TGAATGGAATCTCTGATCTTAGATTTGTTCTCTCGAAGAGTGAAGAAAATGTGGCATCATTC	2624
Db	2388	TGAATGGAATCTCTGATTTTGAATGTTTCTCTCGAAGAGACGGGGAAAATGTGCATCATTC	2447
QY	2625	CCATCATTTCTCTTGGATTTTGAATTTGATNGCAAGACTTGCAATGGAATCTTAGGGGT	2688
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Db	2748	CATTGGATGATTCATGCGGCAGATTAACCTGTTCAATCAGATTCAGAGGCTTATCTTCC	2807
QY	2985	AGAAATTATCTGTTATCCCGGCTGTAAATGCGGAAATTTTGAAGATTTAGAGGTCGAT	3044
Db	2808	AGAACTACTCTTCATTCAGGAATTAATATGTGATATTTTGAAGAAATTAGAAAACCGAT	2867
QY	3045	TATACATCGCATCTCCCTATACGATNGAGAAATGTGTTAAAATATGCTGATTTTAATPA	3104
Db	2868	TTCTATCTGATTAATCTCCCTAATGATNGAGAAATGATCAATTAATAATGCGATTTCAATPA	2927
QY	3105	TGGAATTAGCATGCTGGAATGTAAAAAGGCGATGTAGAT---GTACACAGAGCCATCACCG	3161
Db	2928	TGGCTTATTCATGCTGGAACGTGAAGAGGCGATGTAGATGTATGATTAAGACAAACACACCG	2987
QY	3162	TTCTGTCTTGTATATCCAGAAATGGGAAGCAAGATGTCAACAGCAGTTGCGTCTGTCC	3221
Db	2988	TTCCGTTCTTGTGTATCCCGGAATGGGAAGCAAGATGTCAAAACATTTGCTGTCTGCC	3047
QY	3222	GGGCGCTGCTATATCTCCCGTGTCAACGCTTAACAAAGAGGATATGAGAGGTTGTGTCT	3281
Db	3048	GGGCGCTGCTATATCTCCCGTGTCAACGCTTAACAAAGAGGATATGAGAGGTTGTGTCT	3107
QY	3282	AACGATCATGAATATCGAAGCATTTACAGACGAATCTAAATTTTAAAACTGTGAAGAGA	3341
Db	3108	AACGATCATGAATATCGAAGCATTTACAGACGAATCTAAATTTTAAAACTGTGAAGAGA	3167
QY	3342	GGAAGTGTATCCACGATACAGGAAGCTGTAAATGATTAATCTGACACCAAGGTACAGC	3401
Db	3168	GGAAGTGTATCCACGATACAGGAAGCTGTAAATGATTAATCTGACACCAAGGTACAGC	3227
QY	3402	AG-----TATGTAAATTCCTGTAATGCTGTGATATGAGAGTCATATGAAGTTGA	3449
Db	3228	AGGATTCACAGATTCATGTAAATTCCTGTAATGATGAGATTAAGAGGATCATATGAAGAA	3287
QY	3450	TACTACAGCATCTGTAAATTAACAAACGCACTTAATGAAGAAAGCAAGTATCAGATGACG	3509
Db	3288	TACTACAGCATCTGTAAATTAACAAACGCACTTAACAAAGAAAGCAAGTATCAGATGAC	3347
QY	3510	AAGAGATATCATTTGTGAATATGACAGAGGATATGTGAATTAATCAACCATACAGCTGCG	3569
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QY	3570	TTTATATGACAAAGAAATTGAATATCTTCCAGAAAACCGATTAAGATGATTAAGATTGG	3629
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Qy 3630 AGAAGCGAAGGAGTATTGTAGACACGCTGGAATTACTCCTTATGAGGAA 3684
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Db 3468 AGAAGCGAAGGAGTATTGTAGACATGTGCAATTACTCCTTATGAGGAA 3522
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Search completed: May 24, 2005, 18:20:10
Job time : 585 secs

GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: May 24, 2005, 18:05:45 ; Search time 2016 Seconds
(without alignments)
11215.213 Million cell updates/sec

Title: US-10-614-524-1

Perfect score: 3687
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Scoring table: IDENTITY NUC
Gapop 10.0 , Gapext 1.0

Searched: 5695437 seqs, 3066160638 residues

Total number of hits satisfying chosen parameters: 11390874

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

Published Applications NA.*
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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	3687	100.0	3687	17	US-10-614-524-1
2	3666.2	99.4	4173	17	US-10-428-961-37
3	3260.2	88.4	3684	17	US-10-428-961-62
4	3133.6	85.0	3687	18	US-10-809-953-9
5	1581.6	42.9	3558	9	US-09-826-660-22
6	1495.6	40.6	3624	10	US-09-988-462-6
7	1408.4	38.2	3522	9	US-09-826-660-5
8	1408.4	38.2	3522	11	US-09-837-961-7
9	1408.4	38.2	3522	18	US-10-825-751-7
10	1402	38.0	3534	9	US-09-873-873-25
11	1402	38.0	3534	10	US-09-916-956A-25

12	1402	38.0	3534	10	US-09-997-914-25	Sequence 25, Appl
13	1402	38.0	3534	16	US-10-365-645-25	Sequence 25, Appl
14	1402	38.0	3534	17	US-10-672-163-25	Sequence 25, Appl
15	1402	38.0	3534	18	US-10-739-482-25	Sequence 25, Appl
16	1402	38.0	3534	18	US-10-817-182-25	Sequence 25, Appl
17	1400.6	38.0	3531	9	US-09-873-873-9	Sequence 9, Appl
18	1400.6	38.0	3531	9	US-09-873-873-11	Sequence 11, Appl
19	1400.6	38.0	3531	9	US-09-873-873-13	Sequence 13, Appl
20	1400.6	38.0	3531	10	US-09-916-956A-9	Sequence 9, Appl
21	1400.6	38.0	3531	10	US-09-916-956A-11	Sequence 11, Appl
22	1400.6	38.0	3531	10	US-09-916-956A-13	Sequence 13, Appl
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24	1400.6	38.0	3531	10	US-09-997-914-11	Sequence 11, Appl
25	1400.6	38.0	3531	10	US-09-997-914-13	Sequence 13, Appl
26	1400.6	38.0	3531	16	US-10-365-645-9	Sequence 9, Appl
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34	1400.6	38.0	3531	18	US-10-739-482-13	Sequence 13, Appl
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37	1400.6	38.0	3531	18	US-10-817-182-13	Sequence 13, Appl
38	1392.4	37.8	3534	9	US-09-873-873-27	Sequence 27, Appl
39	1392.4	37.8	3534	10	US-09-916-956A-27	Sequence 27, Appl
40	1392.4	37.8	3534	10	US-09-997-914-27	Sequence 27, Appl
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42	1392.4	37.8	3534	17	US-10-672-163-27	Sequence 27, Appl
43	1392.4	37.8	3534	18	US-10-739-482-27	Sequence 27, Appl
44	1392.4	37.8	3534	18	US-10-817-182-27	Sequence 27, Appl
45	1390	37.7	3567	10	US-09-972-175-58	Sequence 58, Appl

ALIGNMENTS

RESULT 1
US-10-614-524-1
Sequence 1, Application US/10614524
Publication No. US20040016020A1
GENERAL INFORMATION:
APPLICANT: Arnaut, Greta
APPLICANT: Boets, Annemie
APPLICANT: Damme, Nicole
APPLICANT: Mathieu, Eva
APPLICANT: Vanneste, Scijn
APPLICANT: Van Rie, Jeroen
TITLE OF INVENTION: Insecticidal proteins from *Bacillus thuringiensis*.
FILE REFERENCE: NEWBTSUS2
CURRENT APPLICATION NUMBER: US/10/614,524
CURRENT FILING DATE: 2003-07-08
PRIOR APPLICATION NUMBER: US/09/739,243
PRIOR FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 60/173387
PRIOR FILING DATE: 1999-12-28
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1
LENGTH: 3687
TYPE: DNA
ORGANISM: *Bacillus thuringiensis*
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(3687)
US-10-614-524-1

Query Match 100.0%; Score 3687; DB 17; Length 3687;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 3687; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1201 GTGCTTCTATGAGGAAATTTTACCTTGAACCTTATCATGTGTCTCTACTGTAGATTTAAT 1260
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DB 1261 TTTAGGAACCTTCAGAAATCTTTGAAAGAGTACGTATACATATGACAACTTATAG 1320
QY 1321 TCACCTGGGCTTCAATTAATAAGATTCAAGAACTGATTAACACAGAAACAGAACGA 1380
DB 1321 TCACCTGGGCTTCAATTAATAAGATTCAAGAACTGATTAACACAGAAACAGAACGA 1380
QY 1381 CCAATTAATGAATCATATATGATCATATAGTTATCTCATATAGGCTCATTTCAATCTAGG 1440
DB 1381 CCAATTAATGAATCATATATGATCATATAGTTATCTCATATAGGCTCATTTCAATCTAGG 1440
QY 1441 GTGCATGTACAGATATATCTTGGACGACCGTATGCGAGATGCTACAAATACATTAAT 1500
DB 1441 GTGCATGTACAGATATATCTTGGACGACCGTATGCGAGATGCTACAAATACATTAAT 1500
QY 1501 TCAGATAGCATTAACAATATACATTTGTAATCACTTAATTCAGGTACCTCT 1560
DB 1501 TCAGATAGCATTAACAATATACATTTGTAATCACTTAATTCAGGTACCTCT 1560
QY 1561 GTATGATGAGGCCAGAGATTTTACAGAGGGGATATATTCGAACTTACGTTAATGATAGT 1620
DB 1561 GTATGATGAGGCCAGAGATTTTACAGAGGGGATATATTCGAACTTACGTTAATGATAGT 1620
QY 1621 GTATGATGAGGCCAGAGATTTTACAGAGGGGATATATTCGAACTTACGTTAATGATAGT 1680
DB 1621 GTATGATGAGGCCAGAGATTTTACAGAGGGGATATATTCGAACTTACGTTAATGATAGT 1680
QY 1681 CGTTATGCTGCTTCTCAACAAATGCTCTGAGGGTAACTGTCGAGGAGATCACTTTT 1740
DB 1681 CGTTATGCTGCTTCTCAACAAATGCTCTGAGGGTAACTGTCGAGGAGATCACTTTT 1740
QY 1741 GATCAAGAAATTCCTTATGATCTATGAGTGCATAATGATCTTTGACATCTCAATATTTAGA 1800
DB 1741 GATCAAGAAATTCCTTATGATCTATGAGTGCATAATGATCTTTGACATCTCAATATTTAGA 1800
QY 1801 TTTGCAAGATTTTCTGTAGGATTAATGATGATGCGAGTCAACCTGGAATTAAGATA 1860
DB 1801 TTTGCAAGATTTTCTGTAGGATTAATGATGATGCGAGTCAACCTGGAATTAAGATA 1860
QY 1861 AGTATATATGAGGATGAGCAAAAGTTTCACTTGTATTAATTTGAAATTCATTCGAATTAAT 1920
DB 1861 AGTATATATGAGGATGAGCAAAAGTTTCACTTGTATTAATTTGAAATTCATTCGAATTAAT 1920
QY 1921 GCAACCTTGGAGACAGAAATGATTTAGAAAGGCGCAAGAGCGGTGAATGCTGTTT 1980
DB 1921 GCAACCTTGGAGACAGAAATGATTTAGAAAGGCGCAAGAGCGGTGAATGCTGTTT 1980
QY 1981 ACTTAATACGAATCCAGAAAGATTTGAACAAGATGTCAGATTAATTAATTTGATCAAGTA 2040
DB 1981 ACTTAATACGAATCCAGAAAGATTTGAACAAGATGTCAGATTAATTAATTTGATCAAGTA 2040
QY 2041 TCCAAATTTAGTGGCGTTTATGATGATGATTTCTGCTTAATTAATTAATTAATTAATTAAT 2100
DB 2041 TCCAAATTTAGTGGCGTTTATGATGATGATTTCTGCTTAATTAATTAATTAATTAATTAAT 2100
QY 2101 GAGAAAGTGAATATATGCAAAACGACTCAGTATGAAAGAAATTTACTCCAAATCCAAAC 2160
DB 2101 GAGAAAGTGAATATATGCAAAACGACTCAGTATGAAAGAAATTTACTCCAAATCCAAAC 2160
QY 2161 TTCAATCCATTAATGAGCAACGACTTCAATCTATTAATGAGCAATGGAATTTTCA 2220

121 ATAGCCGAGGGGAATATATCAATCACTGTAGCCATCAACAGTCCAAAGGGATT 180
181 AACATAGCTGGTAGAATACTAGGTGATATAGGGTACCGTTTGCGCAAAATAGCTAGT 240
181 AACATAGCTGGTAGAATACTAGGTGATATAGGGGTACCGTTTGCGCAAAATAGCTAGT 240
241 TTTTATATGTTTTCTTGTGGTGAATATAGCCCGCGCGGAGAGATCAGTGGGAAATTTTC 300
241 TTTTATATGTTTTCTTGTGGTGAATATAGCCCGCGCGGAGAGATCAGTGGGAAATTTTC 300
301 CTAGAACATGTGCAACAACTTATTAATCAACAAATACAGAAAATGCTAGGAATACGGCA 360
301 CTAGAACATGTGCAACAACTTATTAATCAACAAATACAGAAAATGCTAGGAATACGGCA 360
361 CTGTGCTGATTAACAAGGTTTAAAGAGATTCCTTTAGAGCTTATCAAGTCACTTGAAGAT 420
361 CTGTGCTGATTAACAAGGTTTAAAGAGATTCCTTTAGAGCTTATCAAGTCACTTGAAGAT 420
421 TGCGTAGAAAAACCGTGATGATGCAAGACGAAGTGTCTTTATACCAATATATAGCC 480
421 TGCGTAGAAAAACCGTGATGATGCAAGACGAAGTGTCTTTATACCAATATATAGCC 480
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481 TTGAACTTGATTTCTTATAGGATGCGCTTTGSCAATTAAGAAACGAAGTTTCCA 540
541 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATATATATAGAGATGCTCT 600
541 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATATATATAGAGATGCTCT 600
541 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATATATATAGAGATGCTCT 600
601 CTTTTTGTGATGATATTTGGGCTTACATGCGAGAAATTCACGTTATATAGACCGCAA 660
601 CTTTTTGTGATGATATTTGGGCTTACATGCGAGAAATTCACGTTATATAGACCGCAA 660
601 CTTTTTGTGATGATATTTGGGCTTACATGCGAGAAATTCACGTTATATAGACCGCAA 660
661 GTGGAACTTGAACGAGATTTATCCGACTATTTGGTGAAGTATATACAGGCTTAAT 720
661 GTGGAACTTGAACGAGATTTATCCGACTATTTGGTGAAGTATATACAGGCTTAAT 720
721 AGCTTGAAGAGGCAAAATGCGCGAGTTGGGTGCGTTATATCAATTCGCTAAGATCTA 780
721 AGCTTGAAGAGGCAAAATGCGCGAGTTGGGTGCGTTATATCAATTCGCTAAGATCTA 780
781 ACCTTGAAGAGGATTAAGTCTAGTGGCACTATTCGCAAGCTATGACACTCCGACTATCCA 840
781 ACCTTGAAGAGGATTAAGTCTAGTGGCACTATTCGCAAGCTATGACACTCCGACTATCCA 840
841 ATTAATATGAGTCTGCTGATTAACAAGGGAAGTTTATCAGACGCAATTTGAGCAACAGG 900
841 ATTAATATGAGTCTGCTGATTAACAAGGGAAGTTTATCAGACGCAATTTGAGCAACAGG 900
901 GTAAATATGCAAGTATGAATTTGGTATATATATATATGCACTTCGTTTTCCGCTATAG 960
901 GTAAATATGCAAGTATGAATTTGGTATATATATATATATGCACTTCGTTTTCCGCTATAG 960
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961 ACTGCGGTTATCCGAAACCCGCACTTACTGATTTTCTAGAACACTTCAATTTTAAAGC 1020
1021 ACTTCAATCAGATGAGTGTCTACTAGGCAATGACTTACGCGGGGGGCAACAATTTCAA 1080
1021 ACTTCAATCAGATGAGTGTCTACTAGGCAATGACTTACGCGGGGGGCAACAATTTCAA 1080
1081 TCTCGGCAATAGAGGCGGATTTAAATACCTCAACGATGGGTCTACCAATACCTTCAAT 1140
1081 TCTCGGCAATAGAGGCGGATTTAAATACCTCAACGATGGGTCTACCAATACCTTCAAT 1140
1141 AATCTGTAAGATTAATCATTTCTCTCGAGACGATATATTTGACTGAATCATATGACGA 1200
1141 AATCTGTAAGATTAATCATTTCTCTCGAGACGATATATTTGACTGAATCATATGACGA 1200
1201 GTCCTTCTATGGGGAATTTACCTTGAACCTATTCATGCTGCCCTACTGTTAGATTTAAT 1260
1201 GTCCTTCTATGGGGAATTTACCTTGAACCTATTCATGCTGCCCTACTGTTAGATTTAAT 1260

1201 GTCCTTCTATGGGGAATTTACCTTGAACCTATTCATGCTGCCCTACTGTTAGATTTAAT 1260
1261 TTTAGGAACCTTCAGAAATCTTTTGAAGAGGTAAGTCTTACTATATAGTCAACCTTATGAG 1320
1261 TTTAGGAACCTTCAGAAATCTTTTGAAGAGGTAAGTCTTACTATATAGTCAACCTTATGAG 1320
1321 TCACCTGGGCTTCAATTAAGATTTGAGAACTGAATTTCCACCAAAACAGAACGA 1380
1321 TCACCTGGGCTTCAATTAAGATTTGAGAACTGAATTTCCACCAAAACAGAACGA 1380
1381 CCMAATTAAGATCATATATGCTATAGTATCTCATATAGGCTCATTTTCACAATCTAGG 1440
1381 CCMAATTAAGATCATATATGCTATAGTATCTCATATAGGCTCATTTTCACAATCTAGG 1440
1441 GTGATGATACAGATATTTCTTGGACGCAACCGTATGTCAGATGCTACAAATACATTAAT 1500
1441 GTGATGATACAGATATTTCTTGGACGCAACCGTATGTCAGATGCTACAAATACATTAAT 1500
1501 TCAGATAGCATACACAAATACCATTTGTTAAATCATTTCACTTAATTCAGGTACTCT 1560
1501 TCAGATAGCATACACAAATACCATTTGTTAAATCATTTCACTTAATTCAGGTACTCT 1560
1561 GTAGTCAGTGGCCAGAGATTTTACAGGAGGGATATATCCGAACCTTAATGTTAGT 1620
1561 GTAGTCAGTGGCCAGAGATTTTACAGGAGGGATATATCCGAACCTTAATGTTAGT 1620
1621 GTACTAGATGAGGTCTTAATTTTAATTAATATCATCATTAACGCGTATGCGTGAAGTT 1680
1621 GTACTAGATGAGGTCTTAATTTTAATTAATATCATCATTAACGCGTATGCGTGAAGTT 1680
1681 CGTTATGCTGCTTCCAAACATGCTCAGAGGTTATGCTGGAGGAGTACTACTTTT 1740
1681 CGTTATGCTGCTTCCAAACATGCTCAGAGGTTATGCTGGAGGAGTACTACTTTT 1740
1741 GATCAAGATTCCTCTAGTACTATAGTGCAGAAATGAGTCTTTGACATCTCAATCTTATGA 1800
1741 GATCAAGATTCCTCTAGTACTATAGTGCAGAAATGAGTCTTTGACATCTCAATCTTATGA 1800
1801 TTTGCAAAATTTCTGTAGGTATTAAGTATGATGCTGGCAGTCAAACTCTGGAAATAGATA 1860
1801 TTTGCAAAATTTCTGTAGGTATTAAGTATGATGCTGGCAGTCAAACTCTGGAAATAGATA 1860
1861 AGTAAATATGCAAGTATGAGAAACGTTTCACTTTGAATTAATTTGAATTTCCAAATTAAT 1920
1861 AGTAAATATGCAAGTATGAGAAACGTTTCACTTTGAATTAATTTGAATTTCCAAATTAAT 1920
1921 GCNACTTGCAGAGCAATATGATTTAGAAAGGCGCAAGAGCGGTGATGCTCTGTTT 1980
1921 GCNACTTGCAGAGCAATATGATTTAGAAAGGCGCGCAAGAGCGGTGATGCTCTGTTT 1980
1981 ACTAATATGCAATTCMAAGAAATTTGAAAACAATGATGACAGATTTATCATATTTGATCA 2040
1981 ACTAATATGCAATTCMAAGAAATTTGAAAACAATGATGACAGATTTATCATATTTGATCA 2040
2041 TCCAAATTTAGTGGCGGTTTATTCGGAATGAAATTCGTTTGAATGAAGAGAAATTAAT 2100
2041 TCCAAATTTAGTGGCGGTTTATTCGGAATGAAATTCGTTTGAATGAAGAGAAATTAAT 2100
2101 GAGAAATGAAATATATGCAAGACGACTCAGTGAATGAAGAAATTTACTCCAAATCCAAAC 2160
2101 GAGAAATGAAATATATGCAAGACGACTCAGTGAATGAAGAAATTTACTCCAAATCCAAAC 2160
2161 TTCAATTCATCATATTAAGCAACCAAGCTTCAATCTACTAATATGCAATTCGAATTTTACA 2220
2161 TTCAATTCATCATATTAAGCAACCAAGCTTCAATCTACTAATATGCAATTCGAATTTTACA 2220
2221 TCTATTCATGAACAACTGAAACATGATGATGGGGGAAGTGAACAACTTCAATCCAGGA 2280
2221 TCTATTCATGAACAACTGAAACATGATGATGGGGGAAGTGAACAACTTCAATCCAGGA 2280
2281 GGAATATGAGTATTTTAAAGAAATTTAGTCACTACGCGGGGACTTTTATATGAGTAT 2340
2281 GGAATATGAGTATTTTAAAGAAATTTAGTCACTACGCGGGGACTTTTATATGAGTAT 2340

QY	2311	CCGACGTATTTATATCAAAAAATAGSAGATCGAAATTTAAAGCTTATATCTCGCTACCA	2400
Db	2341	CCGACGTATTTATATCAAAAAATAGSAGATCGGAATTTAAAGCTTATATCTCGCTACCA	2400
QY	2401	TTAAGAGGGTATATTTAGATAGTCAACATTTAGATATATTTGATTGCTGTTATATGCG	2460
Db	2401	TTAAGAGGGTATATTTAGATAGTCAACATTTAGATATATTTGATTGCTGTTATATATGCG	2460
QY	2461	AAACATGAACATTGGATGTTCCAGATACCGAGTCCGATATGCGCGCTTTCAGTTGAAGC	2520
Db	2461	AAACATGAACATTGGATGTTCCAGATACCGAGTCCGATATGCGCGCTTTCAGTTGAAGC	2520
QY	2521	CCCATCGSAGAGTGGGGAACCGAATGATGCGCACCACTTTGAAATGGAATCTGAT	2580
Db	2521	CCCATCGSAGAGTGGGGAACCGAATGATGCGCACCACTTTGAAATGGAATCTGAT	2580
QY	2581	CTAGATTGTCCTGCAAGATGGAAGAAAATGTCGCATCTATCCCATCTTCTCTTGG	2640
Db	2581	CTAGATTGTCCTGCAAGATGGAAGAAAATGTCGCATCTATCCCATCTTCTCTTGG	2640
QY	2641	GATATTGATATTTGATGACAGACTTGCATGAGATCTAGCGCTGTGGGTGTTCAAG	2700
Db	2641	GATATTGATATTTGATGACAGACTTGCATGAGATCTAGCGCTGTGGGTGTTCAAG	2700
QY	2701	ATTAAAGCGCAGGAAGGTCATGCAAGACTAGAGGAATCTGGAATTTATGAAGAACCA	2760
Db	2701	ATTAAAGCGCAGGAAGGTCATGCAAGACTAGAGGAATCTGGAATTTATGAAGAACCA	2760
QY	2761	TTATTTAGAGAGCAGCTGCTCGTGTGAAGAGACAGAGAAAATGAGAGCAAAAGCT	2820
Db	2761	TTATTTAGAGAGCAGCTGCTCGTGTGAAGAGACAGAGAAAATGAGAGCAAAAGCT	2820
QY	2821	GAAAAACCTACATTTGGAAAACAAAACGAGTATATACAGGCGAAAAGAGCTGTGATGCT	2880
Db	2821	GAAAAACCTACATTTGGAAAACAAAACGAGTATATACAGGCGAAAAGAGCTGTGATGCT	2880
QY	2881	TTATTTGTAGATTCTCAATATATAGATTACAGCGGATACAAACATTTGGCATATTCAT	2940
Db	2881	TTATTTGTAGATTCTCAATATATAGATTACAGCGGATACAAACATTTGGCATATTCAT	2940
QY	2941	GCGGCAGTTAACTTTGTCATCGAAATTCGAGGCTTATCTGTCAATATCTGTTATC	3000
Db	2941	GCGGCAGTTAACTTTGTCATCGAAATTCGAGGCTTATCTGTCAATATCTGTTATC	3000
QY	3001	CCGGGTGTAATGCGGAAATTTTGAAGATTTGAAGGTCGCATTTATCACTGCATCTCC	3060
Db	3001	CCGGGTGTAATGCGGAAATTTTGAAGATTTGAAGGTCGCATTTATCACTGCATCTCC	3060
QY	3061	CTATACGATGCGAAGAAATGTCGTTAAAAATGATTTATATATGATTAAGCATGCTGG	3120
Db	3061	CTATACGATGCGAAGAAATGTCGTTAAAAATGATTTATATATGATTAAGCATGCTGG	3120
QY	3121	AATGTAAAAAGGCAATGATGATGTAACAAGAGCATCAACGTTCTGTCTTTGTTATCCA	3180
Db	3121	AATGTAAAAAGGCAATGATGATGTAACAAGAGCATCAACGTTCTGTCTTTGTTATCCA	3180
QY	3181	GAATGGAGAGCAAGATGTCACAGCAAGTTCGCTGTCCGGGCGTGGCTATATCTCTC	3240
Db	3181	GAATGGAGAGCAAGATGTCACAGCAAGTTCGCTGTCCGGGCGTGGCTATATCTCTC	3240
QY	3241	CGTGTCAAGCGTCAAAAGAGGATATGGAAGGGTGTGTATGATTCATGAAATCGAG	3300
Db	3241	CGTGTCAAGCGTCAAAAGAGGATATGGAAGGGTGTGTATGATTCATGAAATCGAG	3300
QY	3301	AAACAATACAGAGCACTAAAAATTTAAAACTGTGAAGAGAGAAAGTATCCAACGGAT	3360
Db	3301	AAACAATACAGAGCACTAAAAATTTAAAACTGTGAAGAGAGAAAGTATCCAACGGAT	3360
QY	3361	ACAGAGAACTGTATGATATATCTGCACACCAAGATACAGAGATATGTAATTCCTGTAAT	3420
Db	3361	ACAGAGAACTGTATGATATATCTGCACACCAAGATACAGAGATATGTAATTCCTGTAAT	3420

QY	3421	CTGTGATATGAGGATGCAATAGAAATGGATATCTACAGATCTGTAAATTAACAAACCAAT	3480
Db	3421	GCTGATATGAGGATGCAATAGAAATGGATATCTACAGATCTGTAAATTAACAAACCAAT	3480
QY	3481	TATGAGAGAAACGATATACAGATGTACGAAGATATATCTTGTGATATGACAGAGG	3540
Db	3481	TATGAGAGAAACGATATACAGATGTACGAAGATATATCTTGTGATATGACAGAGG	3540
QY	3541	TATGTGAATTTACCAACCTACCAAGCTGTATATATGACAAAAGAAATTAAGTACTTCCCA	3600
Db	3541	TATGTGAATTTACCAACCTACCAAGCTGTATATGACAAAAGAAATTAAGTACTTCCCA	3600
QY	3601	GAACCCGATTAAGTATGATTTGAGATTTGAGAAACGAGAGGAATTAATTTGACAGC	3660
Db	3601	GAACCCGATTAAGTATGATTTGAGATTTGAGAAACGAGAGGAATTAATTTGACAGC	3660
QY	3661	GTGGAATTTCTCTTATGACAGATTAAG	3687
Db	3661	ATGAAATTTACTCTTATGAGAAATTAAG	3687

RESULT 3

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: Sequence 62 Application US/10428961
: Publication No. US2003023711A1
: GENERAL INFORMATION:
: APPLICANT: Baum, James A.
: APPLICANT: Chu, Chin-Rel
: APPLICANT: Donovan, William P.
: APPLICANT: Gilmer, Amy J.
: APPLICANT: Ruppert, Mark J.
: TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin
: TITLE OF INVENTION: Polynucleotides, Compositions, and Methods of Use (Amended)
: FILE REFERENCE: MECO201--1
: CURRENT APPLICATION NUMBER: US/10/428,961
: CURRENT FILING DATE: 2003-05-02
: PRIOR APPLICATION NUMBER: 09/661,322
: PRIOR FILING DATE: 2000-09-13
: PRIOR APPLICATION NUMBER: 60/153,995
: PRIOR FILING DATE: 1999-09-15
: NUMBER OF SEQ ID NOS: 63
: SOFTWARE: PatentIn version 3.2
: SEQ ID NO 62
: LENGTH: 3684
: TYPE: DNA
: ORGANISM: Bacillus thuringiensis
: US-10-428-961-62

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Query Match	88.4%	Score 3260.2	DB 17	Length 3684
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Best local similarity  55.38;  Freq: NO: 0;
Matches 3445;  Conservative  0;  Mismatches 233;  Indels 15;  Gaps 3;

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Qy	1	TTGACTCGAATAGGAAAAATAGAAATGAAATTTATTTAAATGCTTTATTCGATTCGAGCTGTA	60
Db	1	TTGACTTAAATAGGAAAAATAGAGATGAAATTTATTTAAATGCTTTATTCGATTCGAGCTGTA	60
Qy	61	TGCAATCATTCACACAATAGGATCTATCACAGATGCTCGATTGAGATTTCTTTGTGT	120
Db	61	TGCAATCATTCGCGACAAATGAAATCTATCAACGATGCTCGATTGAGATGAGTCTTGTGT	120
Qy	121	ATAGCGGAGGGGAATATATATCAATTCATTGTTAGCGCATCAACAGTCCAAACGGGTATT	180
Db	121	ATAGCGGAGGGGAACAATATCGATTCATTTGTTAGCGCAACAGTCCAAACGGGTATT	180
Qy	181	AACATAGCTGTAGAAATACTAGTGTTATTAGCGCGTACCGTTTGCTGGAACAATAGCTAGT	240
Db	181	AACATAGCTGTAGAAATACTAGTGTTATTAGCGCGTACCGTTTGCTGGAACAATAGCTAGT	240
Qy	241	TTTTTATAGTTTCTTGTTGGTGAATTTATAGGCCCCGCGGAGAGATCAAGTGGGAAATTTTC	300
Db	241	TTTTTATAGTTTCTTGTTGGTGAATTTATAGGCCCCGCGGAGAGATCTTGTTGGGAAATTTTC	300
Qy	301	CTAGAACATGTCGAACAATTATTAATCAACAATATACAGAAATGCTAGGAATACGGCA	360

Db 301 CTAGAACATGTCAGAACATCTTATAGACAAACAGTAACAGAAAAATCTAGGGATACGGCT 360
Qy 361 CTGTGCTGATTAACAAGTTAGAGATTCCTTAGAGCCTATCAACAGTCACTTGAAGAT 420
Db 361 CTGTGCTGATTAACAAGTTAGAGATTCCTTAGAGCCTATCAACAGTCACTTGAAGAT 420
Qy 421 TGGCTAGAAAAACGATGATGATGACAGAAACGAAAGTGTCTTATATCCCAATATATAGCC 480
Db 421 TGGCTAGAAAAACGATGATGATGACAGAAACGAAAGTGTCTTATATCCCAATATATAGCC 480
Qy 481 TTAGAACTGATTTCTTATATGAGATGCGCTTTTGCAATATGAAACCAAGAGTTCCA 540
Db 481 TTAGAACTGATTTCTTATATGAGATGCGCTTTTGCAATATGAAACCAAGAGTTCCA 540
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Qy 601 CTTTATGATGATGATTTGGGCTTACATCGCAGAGAAATTCACGTTATATATAGCCCAA 660
Db 601 CTTTATGATGATGATTTGGGCTTACATCGCAGAGAAATTCACGTTATATATAGCCCAA 660
Qy 661 GTGGAAACAAACGAGATTTATCCGACTATTTGGGTAGAAATGATATATATACAGTCTAAAT 720
Db 661 GTGGAAACAAACGAGATTTATCCGACTATTTGGGTAGAAATGATATATATACAGTCTAAAT 720
Qy 721 AGCTTAGAGAGGACAAATGCGCAAGTTGGGTGCGTTATATATCAATTCGCTAGAGATCTA 780
Db 721 AATTTAGAGAGGACAAATGCTGAAGTTGGGTGCGATATATCAATTCGCTAGAGATCTA 780
Qy 781 ACCTTAGAGGATATATGATCTAGTGCACTATTCCTCAAGCTATGACACTGCGACTTATCCA 840
Db 781 ACCTTAGAGGATATATGATCTAGTGCACTATTCCTCAAGCTATGACACTGCGACTTATCCA 840
Qy 841 ATTAATATCGAGTCTCAGTTTACACAGGAAATTTATACACCGCAATTTGAGACAAAGG 900
Db 841 ATTAATATCGAGTCTCAGTTTACACAGGAAATTTATACACCGCAATTTGAGACAAAGG 900
Qy 901 GTAAAT-----ATGCAATGATGAATTTGGTATATATATATATGACACCTTGTTTCGCT 954
Db 901 GTAAAT-----ATGCAATGATGAATTTGGTATATATATATATGACACCTTGTTTCGCT 954
Qy 955 ATAGAGACTGCGGTTATCCGAGCCCGCATCTACTGATTTTCTAGAACCACTTACAAAT 1014
Db 955 ATAGAGACTGCGGTTATCCGAGCCCGCATCTACTGATTTTCTAGAACCACTTACAAAT 1014
Qy 1015 TTAGCACTTCAATCAGATGAGATGCTACTAGGCACTATGACTTATCTGCGGGGGACACA 1074
Db 1015 TTAGCACTTCAATCAGATGAGATGCTACTAGGCACTATGACTTATCTGCGGGGGACACA 1074
Qy 1021 TTACGGGTATTAAGTCATGAGATGAATTAATCAATATATATGAAATTAAGGATGAGACATAGA 1080
Db 1021 TTACGGGTATTAAGTCATGAGATGAATTAATCAATATATATGAAATTAAGGATGAGACATAGA 1080
Qy 1075 ATTCATCTCGGCAATATAGAGGCGGATTAATTAATCTCAACGCACTGGGTCTACCAATCT 1134
Db 1075 ATTCATCTCGGCAATATAGAGGCGGATTAATTAATCTCAACGCACTGGGTCTACCAATCT 1134
Qy 1081 CTGGAATCGGAACATATAGGGGGTCTTATAGTACCTGAGACACAGGAAATACCAATCT 1140
Db 1081 CTGGAATCGGAACATATAGGGGGTCTTATAGTACCTGAGACACAGGAAATACCAATCT 1140
Qy 1135 TCTATTAATCTGTAGATTAATCAATCTCTCTGAGACGTAATATAGGACTGATCATAT 1194
Db 1135 TCTATTAATCTGTAGATTAATCAATCTCTCTCTGAGACGTAATATAGGACTGATCATAT 1194
Qy 1141 TCTATTAATCTGTATCAATTAATCAATCTCAATCTGAGACGTTATATAGAAACAGATCATTT 1200
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Qy 1195 GCGAGATGCTTCTATAGGGAATTTACCTTGAACCTATTTGATGCTGCTTACTGTTAGA 1254
Db 1195 GCGAGATGCTTCTATAGGGAATTTACCTTGAACCTATTTGATGCTGCTTACTGTTAGA 1254
Qy 1201 GCGAGGATTAATAT-----ACTTCTAATCAATCTCTGTGAATGAGATCACTTGGGCTAGA 1254
Db 1201 GCGAGGATTAATAT-----ACTTCTAATCAATCTCTGTGAATGAGATCACTTGGGCTAGA 1254
Qy 1255 TTTAATTTTAGAAACCTCTAGAAATACTTTGAAAGAGTACTGCTAATATAGTCAACCC 1314
Db 1255 TTTAATTTTAGAAATCCCTCTGAATTTCTCT---AGAGTACCTTCTCTATATCATATAGGG 1311
Qy 1315 TATAGTCACTGCGCTTCAATTAAGATTCAGAAACTGAATTAACCAAGAAACACA 1374
Db 1315 TATAGTCACTGCGCTTCAATTAAGATTCAGAAACTGAATTAACCAAGAAACACA 1374
Qy 1312 TATATCGAGATGAGGACACAACTATTTGATTCAGAACTGAAATTAACCAAGAAACACA 1371
Db 1312 TATATCGAGATGAGGACACAACTATTTGATTCAGAACTGAAATTAACCAAGAAACACA 1371
Qy 1375 GAACGACCAATTTATGATCATATATGCTATATGCTATCTCATAGGCTCATTTTCAAA 1434
Db 1375 GAACGACCAATTTATGATCATATATGCTATATGCTATCTCATAGGCTCATTTTCAAA 1434

Db 1372 GAACGACCAATTTATGATCATATATGCTATATGCTATCTAATATATAGACTAATATGACGA 1431
Qy 1435 TCTAGGTCATGTAACGATATATCTTTGACGCAACCGTAGTCAGATCTGTAACAATACC 1494
Db 1432 AACACTTTAGAGACACGATATATCTTTGACGCAACCGTAGTCAGATCTGTAACAATACC 1491
Qy 1495 ATTAGTTCAGATATGCTAATCAAAAATACATTTGATTAATCACTTCACTTATAGGGT 1554
Db 1492 ATTAGTTCAGATATGCTAATCAAAAATACATTTGATTAATCACTTATTTCAAGGT 1551
Qy 1555 ACCCTGTATGATGATGCGCCAGGATTTTACAGAGGGGATATATCCGAATCAATGTTAAT 1614
Db 1552 ACCCTGTATGATGATGCGCCAGGATTTTACAGAGGGGATATATCCGAATCAATGTTAAT 1611
Qy 1615 GGTATGTAATGATATGAGTCTTAAATTTTAAATATATCAATTAACAGGGATATCGCGTG 1674
Db 1612 GGTATGTAATGATATGAGTCTTAAATTTTAAATATATCAATTAACAGGGATATCGCGTG 1671
Qy 1675 AGAGTTCGTTATGCTGCTTCTGAAACAAATGCTCGAGGGTAACTGTCGAGGGAGTACT 1734
Db 1672 AGAGTTCGTTATGCTGCTTCTGAAACAAATGCTCGAGGGTAACTGTCGAGGGAGTACT 1731
Qy 1735 ACTTTGATCAAGGATTCCTAGTACTATGATGACAAATGAGTCTTGAATCTCAATCA 1794
Db 1732 ACTTTGATCAAGGATTCCTAGTACTATGATGACAAATGAGTCTTGAATCTCAATCA 1791
Qy 1795 TTTAGATTTGCAAAATTTCTGTAGGATATATGATCTGCGAGTCAAACTGTGGAATA 1854
Db 1792 TTTAGATTTGCAAAATTTCTGTAGGATATATGATCTGCGAGTCAAACTGTGGAATA 1851
Qy 1855 AGTATAGTATATATGACAGTATGACAAAGTTCATTTGATTAATTTGAATTCATTTCCA 1914
Db 1852 AGTATAGTATATATGACAGTATGACAAAGTTCATTTGATTAATTTGAATTCATTTCCA 1911
Qy 1915 ATTAGTCAACCTTCGACAGAGATACGATTTAGAAAGGCGCAAGGCGGTAAATGCT 1974
Db 1912 ATTAGTCAACCTTCGACAGAGATACGATTTAGAAAGGCGCAAGGCGGTAAATGCT 1971
Qy 1975 CTGTATTAATTAATGCAATTCGAAAGAGATTTGAAACAGATGTGACAGATTAATCATATTTGAT 2034
Db 1972 CTGTATTAATTAATGCAATTCGAAAGAGATTTGAAACAGATGTGACAGATTAATCATATTTGAT 2031
Qy 2035 CAAATATCCAAATTTATGCGCGTCTTATATGCGATGAATTCGCTTATATGAAAGAGAGAA 2094
Db 2032 CAAATATCCAAATTTATGCGCGTCTTATATGCGATGAATTCGCTTATATGAAAGAGAGAA 2091
Qy 2095 TTACTTGAGAAAGTGAATATATGCGAAACGACTCAGTATGAAAGAACTTACTCCAAGAT 2154
Db 2092 TTACTTGAGAAAGTGAATATATGCGAAACGACTCAGTATGAAAGAACTTACTCCAAGAT 2151
Qy 2155 CCAAACTTCATCATCAATTAAGCAACAGACCTTCATATCTATATGAGCAATGCAAT 2214
Db 2152 CCAAACTTCATCATCAATTAAGCAACAGACCTTCATATCTATATGAGCAATGCAAT 2211
Qy 2215 TTACATCTATCTCATGAAACAAATGTAACATGATGCTGCGGGAAGTGAACATTAACAATC 2274
Db 2212 TTACATCTATCTCATGAAACAAATGTAACATGATGCTGCGGGAAGTGAACATTAACAATC 2271
Qy 2275 CAGAGAGAAATGACGATATTTAAAGAAATTAAGTCACTACCGGGGACTTTTAATGAG 2334
Db 2272 CAGAGAGAAATGACGATATTTAAAGAAATTAAGTCACTACCGGGGACTTTTAATGAG 2331
Qy 2335 TGTATTCGACGATTTATTAATCAAAAAATATGAGAGTGGGAATTAAGCTTATCTGCG 2394
Db 2332 TGTATTCGACGATTTATTAATCAAAAAATATGAGAGTGGGAATTAAGCTTATCTGCG 2391
Qy 2395 TACCAATTAAGAGGATATATGAAAGTATGCAAGATTTTATAGATATATTTGATTCGTTAT 2454
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Qy 2455 AATGCGAAACATGAACATTTGATGCTTCCAGATACCGAGTCCGATATGCGCGCTTTCAGTT 2514
Db 2452 AATGCGAAACATGAACATTTGATGCTTCCAGATACCGAGTCCGATATGCGCGCTTTCAGTT 2511

QY 2515 GAAAGCCCAATCGGAGGTGCGGAGAACGAAATCGATGCGCACCACTTTGAAATGGAAT 2574
DB 2512 GAAAGCCCAATCGGAGGTGCGGAGAACGAAATCGATGCGCACCACTTTGAAATGGAAT 2571
QY 2575 CCGATCTAGATTGTTCTCTGAGAGATGAGAAATGTCGCGATCTCTCCATCATTTTC 2634
DB 2572 CCGATCTAGATTGTTCTCTGAGAGATGAGAAATGTCGCGATCTCTCCATCATTTTC 2631
QY 2635 TCTTTGGATATTGATATTGATGACACAGCTTGTGATGAGATCTAGCGGTGGGTGTA 2694
DB 2632 TCTTTGGATATTGATATTGATGATGATGATGATGATGATGATGATGATGATGATGAT 2691
QY 2695 TTCAAGATTAAAGACGACGAAAGGTGATGACAGACTAGGAAATCTGAAATTTTAAAGAG 2754
DB 2692 TTCAAGATTAAAGACGACGAAAGGTGATGACAGACTAGGAAATCTGAAATTTTAAAGAG 2751
QY 2755 AAACCTTATTAGAGAGAGACCTGCTCTGCTGTAAGAGACAGAGAAATGAGAGAC 2814
DB 2752 AAACCTTATTAGAGAGAGACCTGCTCTGCTGTAAGAGAGACAGAGAAATGAGAGAC 2811
QY 2815 AAACGTAAATCTACATATTGAAACAAACGAGTATATACAGAGGAAATGAGAGAC 2874
DB 2812 AAACGTAAATCTACATATTGAAACAAACGAGTATATACAGAGGAAATGAGAGAC 2871
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DB 2872 GATGCTTATTGTTGATGATCTCAATATATATATATATATATATATATATATATATAT 2931
QY 2935 ATTCATGCGGCAATTAATCTTGTTCATGCAATTCGAGAGCTTATCTGTCAATATCT 2994
DB 2932 ATTCATGCGGCAATTAATCTTGTTCATGCAATTCGAGAGCTTATCTGTCAATATCT 2991
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DB 2992 GTTATCCCGGATGTAATGCGGAAATTTTGAAGATTTAGAGGTGCTATTCATGCA 3051
QY 3055 ATCTCCCTATACAGATGCGAGAAATGTCGTTAAATGAGTATTTAAATGATTAAGCA 3114
DB 3052 ATCTCCCTATACAGATGCGAGAAATGTCGTTAAATGAGTATTTAAATGATTAAGCA 3111
QY 3115 TGTGTGAATTTAAAGGAGCATGATGATGATGATGATGATGATGATGATGATGATGAT 3174
DB 3112 TGTGTGAATTTAAAGGAGCATGATGATGATGATGATGATGATGATGATGATGATGAT 3171
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DB 3172 ATCCGAATGAGGAGAGAGATGTCACAGCAAGTTCGCGTCTGCGGAGCGTGTAT 3231
QY 3235 ATCTCCCTGTCACAGCGTCAAAAGAGGATGAGAGGAGTGTGTAACATTCATGAA 3294
DB 3232 ATCTCCCTGTCACAGCGTCAAAAGAGGATGAGAGGAGTGTGTAACATTCATGAA 3291
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QY 3475 CCGAATTATGAGAGAGAGAGTATACAGATGATGAGAGATGATGATGATGATGATGAT 3534
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DB 3532 AGAGGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3591

QY 3595 TTCCAGAGAAACCGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGAT 3654
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DB 3652 GACAGCGTGAATTAATCTTATGAGAGATGAG 3684

RESULT 4
US-10-809-953-9
Sequence 9, Application US/10809953
Publication No. US20040181825A1
GENERAL INFORMATION:
APPLICANT: Van Mellaert, Herman
APPLICANT: Boterman, Johan
APPLICANT: Van Rie, Jeroen
APPLICANT: Joois, Henk
TITLE OF INVENTION: RECOMBINANT PLANT EXPRESSING NON-COMPETITIVELY BINDING Bt INSECTI
TITLE OF INVENTION: CRYSTAL PROTEINS
FILE REFERENCE: 021565-078
CURRENT APPLICATION NUMBER: US/10/809,953
CURRENT FILING DATE: 2004-03-26
PRIOR APPLICATION NUMBER: US/09/661,016
PRIOR FILING DATE: 2000-09-13
PRIOR APPLICATION NUMBER: PCT/EP90/00905
PRIOR FILING DATE: 1990-05-30
PRIOR APPLICATION NUMBER: GB 89401499.2
PRIOR FILING DATE: 1989-05-31
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 9
LENGTH: 3687
TYPE: DNA
ORGANISM: *Bacillus thuringiensis*
FEATURES:
NAME/KEY: CDS
LOCATION: (1)..(3687)
US-10-809-953-9

Query Match 85.0%; Score 3133.6; DB 18; Length 3687;
Best Local Similarity 91.1%; Pred. No. 0;
Matches 3373; Conservative 0; Mismatches 299; Indels 30; Gaps 3;

QY 1 TTGACTTCAATAGAGAAATGAGATGATGATGATGATGATGATGATGATGATGATGATGAT 60
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QY 121 ATAGCCGAGGAGAAATATATCAATCCACTTGTATGCGCATCAAGTCCAAACGGGTATT 180
DB 106 ATAGCCGAGGAGAAATATATGATTCATTTGTTAGCGCATCAAGTCCAAACGGGTATT 165
QY 181 AACATGCTGTGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 240
DB 166 AACATGCTGTGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 225
QY 241 TTTTATGTTTTCTGTGTGATTAATGATGATGATGATGATGATGATGATGATGATGATGAT 300
DB 226 TTTTATGTTTTCTGTGTGATTAATGATGATGATGATGATGATGATGATGATGATGATGAT 285
QY 301 CTGGAATGTGGAACCACTTATTAATCAACAAATTAACAGAAATGCTAGGAATACGCGCA 360
DB 286 CTGGAATGTGGAACCACTTATTAATCAACAAATTAACAGAAATGCTAGGAATACGCGCT 345
QY 361 CTGCTCGATTCAAGGTTTAAAGAGATCTCTTAAAGCCATATCAACAGTCACTTGAAGAT 420
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QY 421 TGCTAGAAAAACGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 480

406 TGGCTAGAAAACCGTATGATGCAAGAACAGAAAGTGTCTTCTACCCCAATTATAGCT 465
481 TTGAACCTTGATTTTCTTAAATGCGATGCCCTTTTCGCAATTGAAACCAAGAACTTCCA 540
466 TTGAACCTTGATTTTCTTAAATGCGATGCCCTTTTCGCAATTGAAACCAAGAACTTCCA 525
541 TTATTAATGATTAATGCTCAAGCTGCAAAATTTACACCTATTATTATTTAGAGATGCTCT 600
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586 CTTTATGATGATTAATGCTCAAGCTGCAAAATTTACACCTATTATTATTTAGAGATGCTCT 645
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646 GTGAAACAAACGAGAGATTAATTCGACATATTCGATAGATGATTAATTAATACAGCTTAAT 705
721 AGCTTGAGAGGACAAATTCGCGCAAGTTGGGTGCGTTAATCAATTCGATAGATCTA 780
706 AGCTTGAGAGGACAAATTCGCGCAAGTTGGGTGCGTTAATCAATTCGATAGATCTA 765
781 AGCTTGAGAGGATTAATGATTAATTCGCGCAAGTTGGGTGCGTTAATCAATTCGATAGATCTA 840
766 AGCTTGAGAGATTAATGATTAATTCGCGCAAGTTGGGTGCGTTAATCAATTCGATAGATCTA 825
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826 ATTAATACGAGTGTCAAGTTAACAAGGAAATTTAACAAGCAATTCGATAGATCTA 885
901 GTTAATACGAGTGTCAAGTTAACAAGGAAATTTAACAAGCAATTCGATAGATCTA 960
886 GTTAATACGAGTGTCAAGTTAACAAGGAAATTTAACAAGCAATTCGATAGATCTA 945
961 ACTGCGGTATTCGAGACCCGCAATCTACTGATTTCTAGAACAACTTAACAATTTTAC 1020
946 GCTGCGGTATTCGAGACCCGCAATCTACTGATTTCTAGAACAACTTAACAATTTTAC 1005
1021 ACTTCAATCAAGATGAGTGTCAATTCGATTTCTAGAACAACTTAACAATTTTAC 1080
1006 GCTTCAATCAAGATGAGTGTCAATTCGATTTCTAGAACAACTTAACAATTTTAC 1065
1081 TCTGCGCAATGAGAGCGGATTAATTCGATTTCTAGAACAACTTAACAATTTTAC 1140
1066 TCTGCGCAATGAGAGCGGATTAATTCGATTTCTAGAACAACTTAACAATTTTAC 1125
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1126 AATCCTGTAAGATTAATCAATTCGATTTCTAGAACAACTTAACAATTTTAC 1185
1201 GTGCTTCAATGAGAGATTAATTCGATTTCTAGAACAACTTAACAATTTTAC 1260
1186 GTGCTTCAATGAGAGATTAATTCGATTTCTAGAACAACTTAACAATTTTAC 1245
1261 TTTTGAACCTCTCAAGATTTCTAGAACAACTTAACAATTTTAC 1320
1246 TTTTGAACCTCTCAAGATTTCTAGAACAACTTAACAATTTTAC 1305
1321 TCACCTGAGGCTCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1380
1306 TCACCTGAGGCTCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1365
1381 CCAAAATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1440
1366 CCAAAATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1425
1441 GTGATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1500
1426 GTGATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1485
1501 TCAGATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1560

1486 CCAAAATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1545
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1606 GTGATTAATCAATTAAGATTTCTAGAACAACTTAACAATTTTAC 1665
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1846 ATTAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 1905
1918 ACTGCAACCTTGAGACAAATTCGATTTTAAAGAGGCGCAAGAGCGGTAATGCTCTG 1977
1906 ACTGCAACCTTGAGACAAATTCGATTTTAAAGAGGCGCAAGAGCGGTAATGCTCTG 1965
1978 TTTTAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2037
1966 TTTTAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2025
2038 GTATCAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2097
2026 GTATCAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2085
2098 CTTGAGAAATGAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2157
2086 CTTGAGAAATGAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2145
2158 AACTTCAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2217
2146 AACTTCAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2205
2218 AACTTCAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2277
2206 AACTTCAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2265
2278 GAAAGAAATGAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2337
2266 GAAAGAAATGAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2325
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2326 TATCGACGATTTTAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2385
2398 CAATTAAGATTTTAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2457
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2458 GCGAAACATGAACATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2517
2446 GCGAAACATGAACATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2505
2518 AGCCCAATGAAAGATTTTAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2577
2506 AGCCCAATGAAAGATTTTAAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2565
2578 GATTAATTAATCAATTAAGATTTCTAGAACAACTTTTACAAATTTTAC 2637
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QY 602 TTTTGTAGTGAATTTGGGCTTACATCGACGAAATTCAAGTTATTTAGAGCCGCAAG 661
Db 602 TGTTCGATCTGAGTTGCGACTTAATCTCAAGAGATTCAAGAATCTACAGAGACAG 661
QY 662 TGGACAAACGAGAGATTATTCGACTATTTGCCGAGAAATGATTAATACAGGTCTAAATA 721
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QY 722 GCTTGAAGAGAACAAATGCGCAAGTTGGGTGCGTTAATCAATTCGTTAGAGATCTAA 781
Db 722 ACCTAGAGAACTTAACGCTGAGCTTGCTGCTAGATCAACACAGTTCAAGAGATCTTA 781
QY 782 CGTTAGGGGATTAAGATCTAGTGGCACTATTTCCAGCTATGACACTCGCACTTATTCGA 841
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QY 842 TAAATACGAGTGTCACTGATTAACAAGGAGATTATACAGACGCAATTTGAGCAACAGGG 901
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QY 956 TAGAGATCGCGTTATCCGAAGCCGCACTCACTTGATTTTCTAGAACAACTTACAAATT 1015
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QY 1376 AAGCAACAAATTAATGATCAATATAGTCAATAGTATCTCAATAGGCTCATTTCAAT 1435
Db 1373 AGAGACCAAACTAGAGATCTTACTCTCATAGACTTTTAACTTCGTTGATCTCTGGAA 1432
QY 1436 CTAGAGTGCATGTAACAGTATATTTCTTGAACGCAACGTAAGTGCATGTAACAATACCA 1495
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QY 1496 TTAGTTAGATAGATTAACAACAAATACCATTTGTAATAATCACTTAACCTTAATTCAGTGA 1555
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Db 1673 GAGTTAGATACGCTGTGCTTCAAACTATAGTCTTAAAGTACTGTTGGAGATCTACTA 1732
QY 1736 CTTTGTATCAAGAGATTCCTTAAGTACTATGATGCAAAATGATCTTTGACATCTCAATCAT 1795
Db 1733 CTTTGATCAAGATTCCTCATCTACTATGTCGTCTAACAGATCTCTTACTTCAATCTT 1792
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Db 1793 TCAGATTCCTGAGTTCAGATGGATATCTGCTTCTGATCTCAAACTGCTGGAATCT 1852
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Db 1913 TCACTGCTACTCTCGAGGACAGTGTGACTTGGAAAGACACAGAGCGGTGAATGCTC 1972
QY 1976 TGTTTACTAATACGAATCCAAAGAGTTGAAAACAGATGTGACATTTATCATTTGATC 2035
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QY 2216 TCACATCTATCCATGAACATCTGAACATGATGTGGGGAAGTGAACATTAACATCC 2275
Db 2182 -----GATCGTATGAGGAGGAGATACGACATCAACATTC 2218
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Db 2219 AAGAGGTATGATGTGTTCAAGAGAACTAATGTACGCTTGGGTACTTGTATGATGAT 2278
QY 2336 GTTATCCGACGTATTTATATCAAAAATAGAGAGTCCGAAATTAAGCTTATATCTGCT 2295
Db 2279 GCTATCAACATACCTGTACAGAAATGATGAATCGAACTCAAGCTTACCAAGAT 2238
QY 2396 ACCAATTAAGAGGATATTTGAAGATAGTCAAGATTTAGATATTTGATTCGTTATA 2455
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Db 2459 CAAGTCCCATCG----- 2471
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Db 2621 ACCACTTGTGAGAAAGCCCTGCTAGAGTAAGAGGCTGAGAAAGATGAGAGACA 2680
 Qy 2816 AACGTGAAAACTACATTTGAGAAACAAAACGATATATACAGAGCAAAAAGAGCTGTG 2875
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 Db 3041 TTGCTCTGATGAGGAGAGAAAGTTTCAAGAAAGTTTCTGTCTGTCTGTCTGTGCT 3100
 Qy 3233 ATATCTCTCGTGTCAAGCGTCAAGAGGATTAAGAGAGGTTGTGTAAAGATCCATG 3292
 Db 3101 ACATTTCTTCTGTATCGCGCTACAAAGAGATCGAGAAAGTTGCGTCAACATACAGC 3160
 Qy 3293 AAATCGAACAATACAGAGAACTAAATTTAAATCTGTAAGAAAGAGAGTGTATC 3352
 Db 3161 AGATTGAAACAAACCGAGAGCTGAAGTTTCAACAACTCGTGTGAGAGAGAGTCTACC 3220
 Qy 3353 CAACGATACAGAAACGTGTATGATTAATCTGCAACCAAG-----GTACAGCATAT 3406
 Db 3221 CAACAAACACGTAACCTTGCAATGATCACTGCACTCAAGAGATTAAGAGGATCTT 3280
 Qy 3407 GTTAATTCCTGTAATGCTGATATGAGATGATGATGATGATGATGATGATGATGATGAT 3466
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 Db 3341 ACTATGATATGCTTATGAGAGAAAGGCTTACACCGATGATGATGATGATGATGATGATGAT 3400
 Qy 3527 AATATGACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3586
 Db 3401 AATCTAACAGAGGCTATGAGGATCTACACCGCTTACAGCGGCTATGATGATGATGATGAT 3460
 Qy 3587 TAGAATATCTTCCAGAAACCGATGATGATGATGATGATGATGATGATGATGATGATGAT 3646
 Db 3461 TAGAGTATCTTCCAGAAACCGATGATGATGATGATGATGATGATGATGATGATGATGAT 3520
 Qy 3647 TTATTTGATGACAGCGTGAATTTACTCTTATGAGAGAA 3684
 Db 3521 TCAATGTATGATGCGTGAAGTACTTCTGATGAGAGAA 3558

RESULT 6

US-09-988-462-6
 Sequence 6, Application US/09988462
 Publication No. US20030046726A1

GENERAL INFORMATION:

APPLICANT: Kozziel, Michael G.
 Deesil, Nalinul M.
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 Merlin, Ellis J.
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TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
 INSECTICIDAL ACTIVITY IN MAIZE

NUMBER OF SEQUENCES: 94
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Syngenta Biotechnology, Inc.
 STREET: 3054 Cornwallis Road
 CITY: Research Triangle Park
 STATE: NC
 COUNTRY: USA
 ZIP: 27709

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent In Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/988, 462
 FILING DATE: 20-NO. US20030046726A1-2001
 CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 09/547, 422
 FILING DATE: 11-APR-2000
 APPLICATION NUMBER: US 08/459, 504
 FILING DATE: 02-JUN-1995
 APPLICATION NUMBER: US 07/951, 715
 FILING DATE: 25-SEP-1992
 APPLICATION NUMBER: US 07/772, 027
 FILING DATE: 04-OCT-1991

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 REFERENCE/DOCKET NUMBER: S-188051
 TELECOMMUNICATION INFORMATION:
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 TELEFAX: (919) 541-8689

INFORMATION FOR SEQ ID NO: 6:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 3624 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: other nucleic acid
 DESCRIPTION: /desc = "Synthetic DNA"
 HYPOTHETICAL: NO
 FEATURE:

NAME/KEY: CDS
 LOCATION: 1..3621
 OTHER INFORMATION: /product= "Full-length, maize
 optimized cry1B"
 /note= "disclosed in Figure 6."
 SEQUENCE DESCRIPTION: SEQ ID NO: 6:

US-09-988-462-6

Query Match 40.6%; Score 1495.6; DB 10; Length 3624;
 Best Local Similarity 63.7%; Pred. No. 0;
 Matches 2310; Conservative 0; Mismatches 1299; Indels 15; Gaps 2;

Qy 79 ATGATCTATACACAGATGCTGATTTGAGGATTTCTTGTATGATGATGATGATGATGATGATGAT 138
 Db 1 ATGAGACCTGCTGCCAGACCGCCGATCGAGAGACAGCCTGTGATCGCCGAGGCAAC 60
 Qy 139 ATCAATCACTTGTATGCGCATCAAGTCAACCGGATTTAAATAGCTGTAGATA 198
 Db 61 ATGACCCCTGTGTAGAGCGGACAGACCGTGTGACACCGGATCAATCGCCGCCGATC 120
 Qy 199 CTAGGTGATTAAGGCGTACCGCTTGTCTGCAAAATAGTATGATTTTATGTTTCTTGT 258
 Db 121 CTGGGCTGTCTGGCGTGTGCTTGTGCGGCGAGCTGGCAGGCTTCTACAGCTTCTGTG 180

QY 259 GGTGAATTATGCCCCCGGCGAGATCAATGGGAAATTTTCTTAGAACATGTCGAACAA 318
DB 181 GGGGACGTGGCCCCCGGCGCGGACCAAGTGGAGATCTTCCGTGGAGCAGTGGAGCAG 240
QY 319 CTATTAATCAAAATTAACAGAAATGCTAGGAATACGGCACTGTGTGATTAACAAGT 378
DB 241 CTGATCAACGAGACATCAACGAGAACGCGCGAACACCGCCCTGGCGCGCTGCAGGGC 300
QY 379 TTAGAGATTCCTTTAGAGCTATCAACAGTCACTTGAAGATGGCTAGAAAACGTGAT 438
DB 301 CTGGGGGACAGCTTCCGCGCTACAGACAGAGCTTGAGAGACGTGGCTGAGGAACCGGAC 360
QY 439 GATGCAAGAACGAAAGTGTCTTTATACCCAAATATATAGCTTTAGAACTTGATTTTCTT 498
DB 361 GAGCGCCGACCGCGAGCGTGTATACCAAGTACATCCGCTGGAGCTGACCTTCTG 420
QY 499 AATGCAATGCGGCTTTTTCGCAATTAGAAACCAAGAAAGTTCAATTATTAAGTATATGCT 558
DB 421 AAGCCATGCCCCGTGTGCAATCCGCAACGAGAGGTGCCCCGTGTGATGTAGGCC 480
QY 559 CAAGCTGAATTTTACACTATTATTATGAGAGATGCTCTTTTGGTAGTAATTT 618
DB 481 CAGGCGGCACTGCACTGCTGCTGCTGGCGAGCGCAAGCTGTTCGGCAGCAGTTTC 540
QY 619 GGGCTTACATCGCAGAAATTTCAAGTTATATGAGCGCAAGTGAACAAACGAGAT 678
DB 541 GGGCTGACAGCAGAGGATCAAGCTTACAGAGCGCAGGTGAGCGCACCCGGAC 600
QY 679 TATTCGACATTTGCGTGAATGTTATTAACAGTCTAAATGCTTGAAGGAGCAAT 738
DB 601 TACAGGACATCTGCGTGAAGGTATCAACACCGGCTGAACAGCTGCGCGGACCAAC 660
QY 739 GCCGCAAGTGGGTGCTTATTAATCAATTCGTAGAGATCTAAAGTTAGGGGTATTAAGAT 798
DB 661 GCGGCAAGCTGGGTGCGCTAACACAGTTCGCGCGACCTGAACCTGGGCGGTGAGAC 720
QY 799 CTATGCGACTATTTCCAGCTATGACATTCGCACTTATCOAATTAATCAAGTCTCAG 858
DB 721 CTGTGGCCCTGTCCCACTACAGACCGGCACTTAACCCCAATCAACACAGCGCCAG 780
QY 859 TTAAACAAGGAATTTTACAGACGAATTTGAGCAACAGGGTAAATATGCAAGAT 918
DB 781 CTACACCGCAGGATGACACGACGCTATGCGGCCACCGCGTGAACATGCGCAGATG 840
QY 919 AATTGATATATATATATGACCTTCTGTTTCGCTATAGAGACTGCGGTTATCCGAAGC 978
DB 841 AACTGATACAAACAACGCGCCAGCTTCAAGCCCATCAAGGCGCGCCGATCCGAGC 900
QY 979 CCGCATCTATGATTTTCTAGAACAACTTACAAATTTTACACTTATCATCAAGATGAGT 1038
DB 901 CCCACCTGTGACTTCTGTAGACACTGACATCTTCAAGCGCAGACAGCCCTGTGAGC 960
QY 1039 GCTACTAGGATATGATTTACTGCGGGGGGACACAAATTCATCTCGGCAATAGAGGC 1098
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QY 1099 GGAATTAATATCTCAACGACATGGGTCTAACCAATCTTCTATTAATCTGTAAAGATTATCA 1158
DB 1021 GGCTGTAACACGACACCCAGCGGCGCAACAACACAGCATCAACCCCGTGAACCTGCGC 1080
QY 1159 TTTCTTCTCGAGACGTATATTGACTGAATCATATAGCAGAGTGTCTTATAGGGAAAT 1218
DB 1081 TTGCGCAGCGGACGTATACCGCACGAGAGCTAACCGCGGCGTGTGTGTGGGATC 1140
QY 1219 TACTTGAACCTATTCATGTGTCCCTACTGTATGATTTAATTTTATAGAAACCTCAGAAAT 1278
DB 1141 TACTTGAGGCTCATCAAGCGGTGCCACGCTGCGTTCAACTTCAACAAACCCCAAAAC 1200
QY 1279 ACTTTGAAGAAGTACTGTAACTATATAGTCAACCTATAGATCACTGAGGCTTCAATTA 1338
DB 1201 ATCAGGACCGCGGACCGCCAACTTACAGCCAGCTTACAGAGAGCCCGGCGCTGCACTG 1260

QY 1339 AAAGATTCAAACTGAATTAACCAAGAAACAAGAACGCAATTAATGATCATAT 1398
DB 1261 AAGGACAGGAGACCGAGCTGCCCCCGAGACCAACGAGCGGCCCACTACGAGACTAC 1320
QY 1399 AGCTATAGGTATATCTCACTATAGGGCTCATTTCAACATCTAGGTGATGATACAGATAT 1458
DB 1321 AGCCACCGGCTGAGCCACATCGGCATCATCTGCAAGAGCGGTGAAACGTGCCGTATC 1380
QY 1459 TCTTGAACGACCGTATGTCAGATCGTACAAATPACCATTAAGTTCAATGACATACAA 1518
DB 1381 AGCTGAGCCACCGCAGCGCCCAACGCAACCATGCGGCCCAACGCAACCGCACCGAG 1440
QY 1519 ATPACATTTGTAATTAATCACTTCAACCTTATTCAGGTACTCTGTACTGATGCGCCAGAA 1578
DB 1441 ATCCCATGTATGAAGCCACGAGCTGCCCAAGGACCAACCGTGTGCGGCCCCGCGC 1500
QY 1579 TTACAGAGAGGGATATATCCGAATCACTTAATAGTATGATCTAAATATAGGTGCTT 1638
DB 1501 TTCAACGCGGCGGACATCTTGCGCGGCAACAAACCGGCGCTTCCGCCCATCCGCTG 1560
QY 1639 AATTTAATTAATCATCATTAACAGCGGTATCGCGTGAAGTTCGTTATGCTGCTTCAA 1698
DB 1561 ACCGTGAACGGCCCCCTGACCCAGCGCTACCGCATGCGCTTCGCTACGCAACCGTG 1620
QY 1699 ACAATGCTCTGAGGTATCTGTCCGAGGAGATCACTTTGATGCAAGATTCCTAGT 1758
DB 1621 GACTTCGACTTCTTCTGTAGCGCGGCGGACCAACCGTGAACAATTCGCTTCTGCGC 1680
QY 1759 ACTATG--AGTGAATAGTCTTTGACATCTCAATCACTTAATTTGAGCAATTTCT 1815
DB 1681 ACCATGAACGCGCGACGAGCTGAAGTACGGCACTTGTGTGCGCGGCTTCAACACC 1740
QY 1816 GTAGATTAATGATCTGCGAGTCAACTGCTGGAATTAAGTATTAATTAATGACAGT 1875
DB 1741 CCTTCACTTCAACCAATCAAGATCAAGACATCAACGACAGCAAGCGGCTGAGCGGC 1800
QY 1876 AGACAAACGTTTCACTTGTATTAATTAATTAATTCACAACTTCCGAAGCA 1935
DB 1801 AACGGGAGGTATACATCAACAAGATGAGATCATCCGTGACCGCACCTTTCAGAGCC 1860
QY 1936 GAATACGATTTAGAAAGGCGGCAAGAGCGGTGAATGCTCTGTTTCTAATACGAATCCA 1995
DB 1861 GAGTATGACCTGAGAGCGCGCCAGAGGCGCGTGAAGCCCTGTTCACAAACAACCC 1920
QY 1996 AGAAGATTGAAAACAGATGTGACAGATTAATCATATTGATCAATTCATTTAGTGGCG 2055
DB 1921 CGCGGCTGAAGCCGAGCGTGAACCGACTACCATGACCAAGGTGAGCAACTGTGGCC 1980
QY 2056 TGTTTATCGATGAAATTCGTCTTAATGTAAGAAAGAAATTAATGAAAGTGAATAT 2115
DB 1981 TGCCTGAGGACGAGTTCGTGCTGACGAGAAAGCGGAGCTGTGAGAAAGTGAATAC 2040
QY 2116 GCGAAACGACTCAGTATGAAAGAACTTAACCTCAAGATTCAAACTTCATCATCAACAA 2175
DB 2041 GCGAAGCGCTGAGCCACAGAGGCAACTGTGCAAGAACCCCACTTCAACAGCATAC 2100
QY 2176 AAGCAACGACTTCTATCTACTAATGAGCAATGCAATTCATCTATCAAGAACAA 2235
DB 2101 AAGCAGCCGACCTTATCAAGACCAACGAGAGCAACTTCAACAGCATCCAGAGCAG 2160
QY 2236 TCTGAACATGATGTGTGGGAAAGTGAACATTAACAATCAAGAAAGAAATGACATTT 2295
DB 2161 AGCGACACGCGTGTGGGCGAGCGAACAATCAATCAAGAGGCGCAACGAGTTC 2220
QY 2296 AAGAGAAATTAAGTCACTACCTACCGGGGACTTTTATAGAGTATTCGAGATTTATAT 2355
DB 2221 AAGGAAATCTAGTACCTTGCCCGCACTTCAAGAGTGTACCCCACTTACCTGTAC 2280
QY 2356 CAAAAAATAGAGAGTGGAAATTTAAAGCTTATATCTGCTACCAATTTAAGAGGTATAT 2415
DB 2281 CAGAGATCGGCGAGAGCGAGTGAAGGCTTACACCGCTACAGGCTGCGGCTACATC 2340
QY 2416 GAAGATATGCAAGTTTAAGATTAATTTGATTCGTTATTAATGCGAAACATGAACATTC 2475

Db 2341 GAGGACGCGACGCTGAGATCTACCTGATCCGCTACAAAGCGCAAGCAGAAAGCCCTG 2400
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Db 2401 GAGTGCCTCCGACACGAGAGCTGTGGCCCTGAGCGGTGAGAGAGCCCATCGCCGCTGC 2460
Qy 2536 GAGAAACCGAATCGATGCGCACCACTTTGAAATGAAATCTGATCTAGATTGTTCTGC 2595
Db 2461 GGGGAGCCCAACCTCTCGCCCCCCTGCTGAGTGAAGCCCGACCTGAGCTGCAGCTGC 2520
Qy 2596 AGAGATGAGAAAATGAGCATCATTCATGATTTCTTTGAAATGAAATGGA 2655
Db 2521 CGGACCGCGAAGATGCGCCACCAACGACCACTTACGCTGACATCGAGCTGCGC 2580
Qy 2656 TGCAACACTTGCATGAGAAATCTAGCGGTGTGGTGAATTCAGATTTAAGACGAGAA 2715
Db 2581 TGACACGACCTGCACGAGAACTTGCGGTGTGGTGTTCAGATTCAGACCCAGAG 2640
Qy 2716 GGTGATCGAAGACTAGGGAATCTGGAATTTATGAGAAAGAACATTAAGAGAA 2775
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Qy 2776 CTGTCTGTGTAAGAGAGCAAGAAAATGAGAACAAAGCTGAAAACTACATTTG 2835
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Qy 2836 GAAACAAACGAGATATATACAGAGGCAAAAGAGCTGTGATGTTATTTGATTTCT 2895
Db 2761 GAGACCAAGGCGGTGTACACGAGGCGCAAGAGGCGGTGAGCGCTGTGTGAGACG 2820
Qy 2896 CAATATATATATATATCAAGCGGATATCAACATTTGCGATGATTCATGCGGAGATMAA 2955
Db 2821 CAGTACACGCGCTGAGCGCGACCAACCAATCGGATGATTCACGCGCGCAAGCTG 2880
Qy 2956 GTTCATCGAATTTGAGAGGCTTATCTGTCAGAATATCTGTATCTCCGGGTGTAATGCG 3015
Db 2881 GTGACACGCGATCGCGAGGCTTACCTGAGCGAGCTGCGGTGATCCCGCGTGAAGGCC 2940
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Db 2941 GAGATCTTGAGAGAGCTGAGAGGCGCAATCATCAACCGCATACGCTGTACAGAGCCCGC 3000
Qy 3076 AATGCTGTTAAAAATGCTGATTTTATATATGATATGATGATGATGATGATGATGATGAT 3135
Db 3001 AAGGTGTGAAGAAAGCGGCACTTCAACAGCGGCTGACCTGTGGAAGCGTGAAGGCGCAC 3060
Qy 3136 GTTGAATGATCAACAGAGCCATCAACCGTTCTGTCTTGTATATCCAGATGGAAGCAGAA 3195
Db 3061 GTGGAGGTGAGAGAGCCACCAACCGAGCGACTGTGATCCCGAGTGGAGGCGGAG 3120
Qy 3196 GTGTCAACAGAGTGTGCGCTGTGCGGGGGGTGGCTATATCCCTCGGTCAAGAGCTAC 3255
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Qy 3256 AAGAGGAGATATGAGAGGCTGTGTATACGATCCATGAAATCGAAGCAATTAACAGAGAA 3315
Db 3181 AAGAGGGGTCTAGCGCGAGGCTGTGTATCATTCAGAGATCGAAGCAACCGAGAG 3240
Qy 3316 CTAAAAATTTAAAACTGTGAAGAAAGAGATGTATCAACGATACAGAAAGCTGTAT 3375
Db 3241 CTGAGATTCAGAAACCGCGAGAGAGAGATGTATCCCAACCAACCGGACCTGCAAC 3300
Qy 3376 GATTATCTGACACCAAGGTACAGC-----AGTATGTAATTCGCGTAATGCT 3423
Db 3301 GATCTACCGCCCAACGAGGCAACCGCGGCTGCGCGACGCTGCAACAGCGCGACGCC 3360
Qy 3424 GATATGAGAGATCATATGAAGTTGATATACAGCATCTGTATATTAACAACGACTTAT 3483
Db 3361 GGTATGAGAGAGCGCTTACGAGGTGAGACACCGCGCGAGGTGAATCTAAGGCCCACTAC 3420
Qy 3484 GAAAGAAACGATATACAGATGTACGAAGATATATATGTAATGACAGAGGTAT 3543

Db 3421 GAGAGAGAACCTTACACCGAGCTGCGCGCGACCAACCACTGCGAGTACGACCGCGCTAC 3480
Qy 3544 GTGAATTTATCCACCACTACGAGCTGTATATGACAAAGAAATTAATATCTCCAGAA 3603
Db 3481 GTGAATCTAACCCCCCGTGGCCCGGCTACGTGACCAAGAGCTGAGTATCTCCGAG 3540
Qy 3604 ACCGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3663
Db 3541 ACCGACACCGGTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3600
Qy 3664 GAATTAATCTCTTATGAGAGAAATG 3687
Db 3601 GAGCTGCTGTGATGAGAGATAG 3624

RESULT 7

US-09-826-660-5
Sequence 5, Application US/09826660
Patent No. US20010026940A1
GENERAL INFORMATION:
APPLICANT: Cardineau, Guy A.
APPLICANT: Steiman, Steven J.
TITLE OR INVENTION: Nerve, Kenneth E.
FILE REFERENCE: NA-714XC2D1
CURRENT APPLICATION NUMBER: US/09/826,660
PRIOR FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/178,252
PRIOR FILING DATE: 1998-10-23
PRIOR APPLICATION NUMBER: 60/065,215
PRIOR FILING DATE: 1997-11-12
PRIOR APPLICATION NUMBER: 60/076,445
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 3522
TYPE: DNA
ORGANISM: Bacillus thuringiensis
US-09-826-660-5

Query Match 38.2%; Score 1408.4; DB 9; Length 3522;
Best Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1061; Indels 108; Gaps 9;

Qy 285 TCAGTGGGAATTTCTCTAGAACATGTCGAACCACTTAATTAATCAACAAATTAACAGAAA 344
Db 207 TGAATGAGCTTATTTCTTTTACAGATTGAACAAATGATTGAGCAAAAGATTAAGAAACATT 266
Qy 345 TGCAGGAATACGCACTTCTGATTAACAAGTTTGAAGATTCTTTAGAGCTATCA 404
Db 267 GGAAGGAACCGGCAATTTCTACATTAACAGAGGTTAGCAGATAGCTATGAATTTATAT 326
Qy 405 ACAGTCACTTGAAGATTGGCTAGAAAAAGCTGATGATGAGAAAGCAAGAGTGTCTTTA 464
Db 327 TGAAGCACTAAGAGAGTGGAGCAAAATCTTAATTAATGCACAATTAAGGAAGATGCGC 386
Qy 465 TACCAATATATAGCTTGAACCTGATTTCTTAATGCAATGCGATGCGCTTTTGGCAATAG 524
Db 387 TATTCGATTTGCTAATACAGACAGCGTTTAATTAACGCAATTAATTTTACACTTAC 446
Qy 525 AAACCAAGAGTTCCATTAATTAATGATATGCTCAAGCTGCAAAATTAACCGATTAAT 584
Db 447 AAGTTTGAATCCCTCTTTATCGGCTATGTTTCAAGCGGCAATTTATATATCACT 506
Qy 585 ATTGAGATGCTCTCTTTTGTGATGAAATTTGGCTTAATTCGACGAGAAATTCACG 644
Db 507 ATTAAGAGAGCTGTATGTTTGGGCAAGGTTGGGCACTGATATAGCTACTGTATATA 566
Qy 645 TTATTTTGAAGCGCAAGTGAACAAACGAGATTTATCCGACTATTTGCTAAGATGTA 704
Db 567 TCATTAATTAATGATTAATTAATCTTATTCATAGATATACGAAACATTTTGTGACACATA 626

QY 705 TAATACAGCTCTAATATAGCTTGAGAGGACAAATGCCGCAAGTTGGGTGCTTATATCA 764
DB 627 CATCAAGAGTTTGAAAATTAAAGAGTACTTAATCTCGACAAATGCGCAAGATTCAATCA 686
QY 765 ATCCCGTAGAGTCTAAGCTTAGGGGATATAGATCTAGTGGCACTATGCCAGCTATGA 824
DB 687 GTTTAGAGAGATTTTAACTTACTGTATTTAGATATCTGTCTTTTCCGAATACGA 746
QY 825 CACTCGCACTTATCCAATAAATAGAGTGTCTAGTTAACAAAGGAGTTTATACAGACG 884
DB 747 TGTAGAACATATCCAAATTCAGAAAGTCAATCCCAATTAACAAAGGAAATTTATCAAGTTC 806
QY 885 AATTGAGCAACAGGGGTAAATATGCGAATGAATGGTATTAATTAATATGACCTTC 944
DB 807 AGTAATTTGAGAAATCTCCAGTTTCTGC-----TAATATACCTAA 845
QY 945 GTTTTCGCTATAGAGCTCGGTTATCCGAGGCCGCACTCTAGTATTTCTAGAAC 1004
DB 846 TGGTTTAAATAGGGCGGAATTTGAGATTAGACGCCCACTTATGACCTTTATGAA--- 902
QY 1005 ACTTAACATTTTATAGCACTTCAATCGATGAGTGTACTAGGCATATGACTTAGCG 1064
DB 903 -----TTCTTGTGTTGTAACGACAGACTGTTAAGAACTCAACCTGTGGGAGG 953
QY 1065 GGGGACACAACTCAATCTCGGCCCAATAGAGGCGGATTAATATCTCAACGATGGTTC 1124
DB 954 ACACTTAGTAGTTCAGAAATACGGCTGTGAACCGATTAATTTCTGTATACGGGGT 1013
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DB 1014 CTTCATCTCTGTGGGCCCATTTGGATTGAGATGAGATCCAGTCTCTTTTATCGAC 1073
QY 1185 TGAATCATATGACAGAGTGTCTTATAGGGGAATTTACCTTGAACCTATTCATGGTCCC 1244
DB 1074 ATTATGAGATCTGTTTTGTGTCGAGAGGAT-----TTGGGAATCTCATATGACT 1127
QY 1245 TACTGTAGATTTAATTTTAGAACCCTCGAATACTTTGAAAGAGTACTGTACTA 1304
DB 1128 GGGGCTTTAGGGGAGTAGCAATTTCAACAACTGTGACAAACCAACCCGAACTTTAGAAA 1187
QY 1305 TAGTCAACCTTATAGATCACCTGGGCTTCAATTAAGAACTTCAGAACTGAATTACCA 1364
DB 1188 TAGTGGACCATATGATTTCTTATAGTAATCCACCTCAGAGATATATGTGGGCACT- 1246
QY 1365 AGAAACAAACGAACGACCAATTAATGAATCATATAGTATAGTTATCTCAATAGGCT 1424
DB 1247 GGAATGATTTAATGATCATGTATTAATCATGTATGATGATGACATGCGAGTGAATTT 1306
QY 1425 CATTTCAATCTTAGGTGATGATGACGATATATTTCTTGGACGACCGTATGTCAGATCG 1484
DB 1307 CAGGAAGTATTCATGAG--AGCTCAATGTCTTTTGGACGACCGTATGTCMAACCC 1364
QY 1485 TACAAATACCAATAGTTCAGATAGCATTAACAAATACCAATGGTAAATCATTCACCT 1544
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QY 1545 TAAATTCAGTACCTCTAGTACAGTGGCCAGAAATTTACAGAGGGGATTAATCCGAC 1604
DB 1425 TCAGTCAGTATCTATCTGTGTGAAGAGGCCGGGTTTACGAGAGATATTTCTTGAAG 1484
QY 1605 TAAAGTTAATAGTATGATTAATAGTATGGCTTTAATTTAATATATCATATTAACGG 1664
DB 1485 AACAAATGAGAGCAATTTGCTTATCTATTTGTTAAATATAGGCAATTAACCCCAAG 1544
QY 1665 GTATCGGTGAGAGTGTATATGCTGTCTCAAAACAAATGCTCTGAGGGTAACTGTCCG 1724
DB 1545 GTATCGTGAAGATAGCTATGCTCTACTACAAATCTAAGATTTTACGTAACGGTTGC 1604
QY 1725 AGGAGTACTACTTTTATGATCAAGAAATCCCTAGTACTATGATGCAATGATCTTTGAC 1784
DB 1605 AGGTGAACGAGATTTTCTGTGTCAATTTTAAACAAACAAATGATATCGGTGACCATTAAC 1664
QY 1785 ATCTCAATCATTTAATGATTTGACAAATTTCTGTATGATTAATGATCTGTGCACTCAAC 1844

DB 1665 ATTCATATCTTTATAGTACGAACTATTAATACAGCTTTTACATTCCTCAATGACCAAG 1724
QY 1845 TGGT---GGAAATAGATATAGTATTAATGACAGTATGACAAACGTTTCACTTGATTAAT 1901
DB 1725 TAGTTTCAAGATATAGTATGATATCTTTAGTTCAAGGAATGAAATTTATATAGACAGAT 1784
QY 1902 TGAATTCATTCATTAATCTGCAACCTTGCAGACAGAAATCGATTTTGAAGAGGCGCAAG 1961
DB 1785 TGAATTTATTCAGTTTACTGCAACATTTGACAGAAATATGATTTGAAGAGACACAAA 1844
QY 1962 GGGGTGAATGCTCTGTTACTAATATGCAATCCAAAGATTTGAAGAAACAGATGTGACAG 2021
DB 1845 GGGGTGAATGCTCTGTTACTAATATGCAATCCAAAGATTTGAAGAAACAGATGTGACAG 1904
QY 2022 TTATCATATTTGATCAAGTATTCATTAATTTAGTGGCGTGTATTCGATGAATCTGCTTAA 2081
DB 1905 TTATCATATTTGATCAAGTATTCATTAATTTAGTGGTGTATTCAGATGAATTTGTCTGA 1964
QY 2082 TGAAGAGAGAAATTAATCTGAGAAAGTGAATATGCGAAACGACTCATGTATGAAGAAA 2141
DB 1965 TGAAGAGAGAAATTAATCTGAGAAAGTGAATATGCGAAACGACTCATGTATGAAGAAA 2024
QY 2142 CTTACTCCAAAGATCCAACTTCATCATTCATTAAGAACCAACGACTTCATATCTACTAA 2201
DB 2025 TTACTTCAAGATCCAACTTCATTAAGGCAATCATAGGCACTTAGAC----- 2070
QY 2202 TGAGCAATGAAATTTCAATCTATCCATGAACTGAACTGATGTGGGAAATGA 2261
DB 2071 -----CGTGTGAGAGAAAGTAC 2090
QY 2262 GAACTTACATTCAGAAAGAAATGACGATTTTAAAGAAATTTAGTCACTACCTCCGG 2321
DB 2091 GGATATTTACATTCAGAAAGAAATGACGATTTTAAAGAAATTTAGTCACTACCTCCGG 2150
QY 2322 GACTTTAATGATGTTATCCGACGTAATTTATATCAAAATATGAGAGTCCGAAATTA 2381
DB 2151 TACCTTGAATGATGTTATCCAGATTTATATCAAAATATGATGATCGAAATTTAA 2210
QY 2382 AGCTTATCTCGTACCAATTAAGAGGTATATGAAATAGTCAAGATTTAGATAT 2441
DB 2211 ACCCTATCTCGTATCAATTAAGAGGTATATGAGATAGTCAAGATTTAGATAT 2270
QY 2442 TTTGATTCGTTATATGCGAAACATTAACATTTGATTTCCAGGTATCCGATCCGTA 2501
DB 2271 TTTGATCCGTTATTAAGCAAAACAGAAACAGTAATGCTATGATGCGGTTCTTATG 2330
QY 2502 GCGGCTTCAAGTTGAAGCCCAATCGGAAGTGCAGGAACCGAATCGATGCGCACCA 2561
DB 2331 GCGGCTTCAAGTTGAAGCCCAATCGGAAGTGCAGGAACCGAATCGATGCGCACCA 2390
QY 2562 TTTTGAATGAATCCGATCTAGATTTTCTGCGAGATGAGAAATGTGCGCATCA 2621
DB 2391 CTTGAATGAATCCGATCTAGATTTTCTGCGAGATGAGAAATGTGCGCATCA 2450
QY 2622 TTCCATCATTTCTCTTGGATATTAATATGATGATGATGATGATGATGATGATGATG 2681
DB 2451 TTGCAATCATTTCTCTTGGATATTAATATGATGATGATGATGATGATGATGATGATG 2510
QY 2682 CGTGTGGGTGTATTAAGAGGATTAAGAGGATGATGATGATGATGATGATGATGATGATG 2741
DB 2511 TGTATGGGTGTATTAAGAGGATTAAGAGGATGATGATGATGATGATGATGATGATGATG 2570
QY 2742 ATTTATTTGAAGAAACCAATTTAAGAGAGCACTGTCTGTGTGAAGAGACAGAA 2801
DB 2571 GTTTCTGAAGAAACCAATTTAGTGGGAGAGCACTGTGTGTGAAGAGACAGAA 2630
QY 2802 AAAATGAGAGCAAACTGGAAGAACTCAATTTGGAACAAACGATATATCAAGG 2861
DB 2631 AAAATGAGAGATTAAGTGAAGAAATTTGGAACAAACGATATATCAAGG 2690
QY 2862 AAAAGAGCTGTGAGATTTTATTTAGATTTCTCAATTAATGATTAAGAGGATAC 2921

Db	954	ACACTTAGTTAGTTACAGAAATACGGCTGGTAACCGTAATTAATTTCCCTAGTTACGGGGT	1013
Qy	1125	TACCAATACCTCTATTTAATCCTGTAGATTATCATCTTCTTCGACGATATATTGGAC	1184
Db	1014	CTTCATTCCTGGTGGCCGCAATTGGATTGGAGATGAGGATCCACGCTCTTTTATGGAC	1073
Qy	1185	TGAATCATATGACGAGAGTCTCTATGGGGAAATTACCTTGAACTTATCAGTGTGCC	1244
Db	1074	ATTATCAGATCCCTGTTTTGTCCGAGGAGAT-----TTGGGAATCCATATATGACT	1127
Qy	1245	TACGTATGATTTTAATTTTAGSAACTCCGAAATCACTTTGAAAGAGTACTGTACTA	1304
Db	1128	GGGGCTTAGGGGAGTAGCAATTTCAACAACTGGTACGACACCCGAACTTTAGAA	1187
Qy	1305	TAGTCAACCCATAGTCACTCGGGCTTCAATTAAGATTCAAGAACTGAATTCACCC	1364
Db	1188	TAGTGGGACCATAGATTTCTCTAGATGAAATCCCACTCAGATTAATATGTGGGGACC-TT	1246
Qy	1365	AGAAACAACAGACGACCAATTAATGATCATATAGTCATAGTTATCTCACATAGGCT	1424
Db	1247	GGATATGATTAATGATCATGATTAATATCATGTTACATTTTATGACATAGTGAATTT	1306
Qy	1425	CATTTCACAATCTAGGGTGATATACCAATTAATTTTGACCGGACCGTATGAGATCG	1484
Db	1307	CAGGAGTGAATTCATGAG--AGCTCCAAATGTTTTTGGACGCAACGGTATGCAACCC	1364
Qy	1485	TACAAATACCTTAGTTAGTACAGATACATACAAATACCAATTCGTAATATCTCAACT	1544
Db	1365	TACAAATACATTAATGATCCGAGAGAGATTCTCAATACANTGGTAAAGACATACACT	1424
Qy	1545	TAATTCAGGTAAGCTCTGTAGTCACTGAGCCAGATTTACGAGAGGAGATATATCCGAC	1604
Db	1425	TCACTCAGGTACTCTGTGTGAAGAGGCGCGGGTTTACGGAGAGAAATATCTTCCAGC	1484
Qy	1605	TAAGTTAATGTATGTACTAATATATATGAGCTTAATTTTAATATACATATTAACGC	1664
Db	1485	AACAAGTGAAGACCAATTTGCTTAATCTATTTGTAATTAATATGGCAATTAACCCAAAG	1544
Qy	1665	GTATCGCGTGAAGTTCGTATNGCTGCTTCAACAAATGGTCTCGAGGGGTATCTGCG	1724
Db	1545	GTATCGTCAAGAAATACGATATGCTCTACTACAAATCTAAGAAATTTACGTACGGTTGC	1604
Qy	1725	AGGAGTACTACTTTTGATCAAGATTCCTCAGTACTATGAGTCAATGAGTCTTTGAC	1784
Db	1605	AGGTGAACGATTTTTTGCTGGTCAATTTAACAAACATGATACCGGTGACCATTAAC	1664
Qy	1785	ATCTCAATCATTTTGATTTGCGAAATTTCTGTAGATTTATGTGCAATCTGGCAATCAAC	1844
Db	1665	ATTCCAATCTTTTATGTTACGCACTATTAATACAGCTTTTACATTTCCCAATGACCGAG	1724
Qy	1845	TGCT---GGATTAAGTATTAAGTATTAATATGACGTACCAACGTTTCACTTTGATTAAT	1901
Db	1725	TAGTTTACAGATAGGTGCTGATATCTTTATGTTACGAGGATGAAAGTTTATATGACAGATT	1784
Qy	1902	TGAATTCATTCCAATTACTGCAACCTTCGAGACGAATACGATTTAGAAAGGCGCAGA	1961
Db	1785	TGAATTAATTCAGATTAATGCAATTTGAAAGCAAAATATGATTTAGAAAGACACAAA	1844
Qy	1962	GGCGGTGAATGCTCTGTTTACTAAATACGATTCAGAAAGATTGAAAACAGATGTGACGA	2021
Db	1845	GGCGGTGAATGCGCTGTTTACTCTATTAACCAATATGGGATTAATAACAGATGTGACGGA	1904
Qy	2022	TTATCATATTTGATCAAGTATCCAAATTTATGAGCGGTTTATCGGATGAATCTGCTTGA	2081
Db	1905	TTATCATATTTATCAAGTATCCAAATTTATGAGATTTGTTATCAATGAATTTTGTCTGGA	1964
Qy	2082	TGAAAGAAGAAATTAATCTTGAAAGTGAATATGCGAAACGACGTAGTGAAGAAATA	2141
Db	1965	TGAAAGAAGAAATTTGTCGGAAGAGTCAAAACATGCGAAGGACGTCAATATGAGCGGA	2024
Qy	2142	CTTATCTCAAGATCCAACTTCAATCATCAATATAGCAACCGACCTTCAATCTACTAA	2201

D	b	2025	TTTACTCAAGATCCAAACTTCGAAGGATCAATAGGCACTAGAC-----	2070
O	y	2202	TGAGCAATGGAATTTCACTCTATCCATGAACTGCAACATGATGCTGGGAGTGA	2261
D	b	2071	-----CGTGGTTGGAAAGGAATAC	2090
O	y	2262	GAACTTACATCCAGGAAGAAATGAGCTATTTTAAAGAAATTACGACACTACGGG	2321
D	b	2091	GGATATTACATCCAAAGGAGATGAGCTATTCAAAGAAAATTATGTCACTACAGG	2150
O	y	2322	GACTTTAATGAGTGTATCCGACGTATTTATCCAAAATAAGAGAGTCGAATTAA	2361
D	b	2151	TACCTTGATGAGTGTATCCAGAGTATTATCAAAAATAGATGCTGAATTTAA	2210
O	y	2382	AGCTTAATCCGCTACCAATTAAAGGGTATATTGAAGATAGTCAAGATTGAAGATTA	2441
D	b	2211	ACCCATTACTCGTTATCAATTAAAGGGGTATATCCAGATAGTCAAGACTTGAAGAACTTA	2270
O	y	2442	TTTGATTTGCTATTAATGCGAAACATGAAACATGGAATGTCAGGTTCCGATCCGATG	2501
D	b	2271	TTTGATCCGCTATTAAGCAAAACAGAAACAGTAATATGTCTAGGTACGGGTTCTTATG	2330
O	y	2502	GGCGTTTACAGTTGAAAGCCCAATCGGAAGTCGGAACCCGAATCGATCGCACCA	2561
D	b	2331	GGCGCTTTGATGCCAAAGTCCCAATCAGAAAGTGTGGAACCGAATGATGCGGCCACA	2390
O	y	2562	TTTTGAATGGAATCCTGATCTAGATTGTTCTGCAAGATGAGAAAATGTGCGATCA	2621
D	b	2391	CTTTGAATGGAATCCGATCTAGATTGTTCTGCGCAGAACGGGGAAAATGTGCAATCA	2450
O	y	2622	TTTCCCATCTCTCTTTGGAATTTGATTAATTGGAATGCAACAGCTTGATGGAATCTAGG	2661
D	b	2451	TTTGCAATCTCTCTTTGGAATTTGGAATGTTGATGATACAGCTTAAATGAGACTTGA	2510
O	y	2662	CGTGGGTTGATTTCAAGATTTAAAGCCAGGAAGTATGATCAAGACTAGGGAATCTGGA	2741
D	b	2511	TGATGGGTGATTTCAAGATTTAAAGCCAGATGCGCATGCCAAGACTAGGAATCTAGA	2570
O	y	2742	ATTTATTTGAAGAGAAAACATTAATTAGGAAGCACTGTCGTGTGAAGAGACAGAA	2801
D	b	2571	GTTTCTCGAAGAGAAACCATTAGTGGGGAGACATGACTGTTGAAAATAAGCAGAA	2630
O	y	2802	AAAAATGAGAGACAAACGTGAAAACTACATTTGAAAACAAACGATATATACAGGC	2861
D	b	2631	AAAAATGAGAGATMAACGTGAAAAATTTGMAATTTGMAACAAATATTTTAAAGAGC	2690
O	y	2862	AAAAAGCGTGGAGATGCTTATTTGTGATTTCTCAATATATATAGATTAACAGCGGATAC	2921
D	b	2691	AAAAAGATCTTAGATGCTTTATTTGTAACTCTCAATATGATCAATTAACAGCGGATAC	2750
O	y	2922	AAACATTTGGCATGATTCATGCGGCAAGATMAACTTGTTCATCGAATTCGAGAGCTTATCT	2961
D	b	2751	GAATATTGGCATGATTCATGCGGCAAGATMAACGTGTTCAATGAATTCGGAAGCGTATCT	2810
O	y	2962	GTCAGATATCTGTTATCCCGGGTGTAAATGCGGAAATTTTGAAGAAATTGAAGGTCG	3041
D	b	2811	TCCAGAGTTATCTGTGATTCGCGGTGTAAATGTAGACATTTTCGAAGAAATTTAAAGGCGC	2870
O	y	3042	CATTATCACGCAATCTCCCTATATGAGATGCGGAAATGTGCTTAATAATGGGATTTTAA	3101
D	b	2871	TATTTTCACTGCAATTTCTCTATATAGATGCGGAAATGTCAATTAACCGGTGATTTCAA	2930
O	y	3102	TAATGATTTAGCATGCTGTGAATGTMAAAGGGCATGTAGTGT---ACAACAGAGCATCA	3158
D	b	2931	TAATGGCTTATCATGCTGTGAACGTGAAGGCAATGATGTGAAGAAACAACAACA	2990
O	y	3159	CGGTTCTGTCTTTGTTATCCAGAAATGGAACAGAGTGTCAACAGACTTCCGCTCTG	3218
D	b	2991	CCGTTCCGTCCTTGTTGTTCCGGAATGGGAAACAAAGTGTCAACAAGAAATTCGTCGTG	3050
O	y	3219	TCCGGGGCCGGGTATATCTCCGTGTCAACGATCAAAAGGGGATTTGAGAGAGGTTG	3278
D	b	3051	TCCGGGTCTGGCTATATCTTCTGTGTCAACGATCAAGAGGGGATTTGAGAGAGTTG	3110

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1545 TAATTCAGGTACCTCTGTAGTCAATGAGCCAGAGATTTCAGAGGGATTAATCCGAAC 1604
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3159 CCGTCTGTCTCTTGTATTCAGAAATGGAAGCAAGTGTCAACAGCACTTCCGCTCTG 3218
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3171 AGAGAAAGTGTATCCAAAGGATACAGAAACGTGTATGATTAATCTGACCAATCAAGAA 3330
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3453 TACAGATCTGTTAATTAACAAACGACTTATGAGAAAGAAACGTATATCAGATGTACAGAG 3512
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Db 3411 TGTGACAAAAGATTAGAGTACTTCCAGAAACCGATAGGTATGATGATCGGAGA 3470
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Db 3471 AACGGAAGGAGATTATTTGTAGACACGCTGGAATTACTCTTATGAGGAA 3522

RESULT 10
US-09-873-25
Sequence 25, Application US/09873873
Patent No. US20020064865A1
GENERAL INFORMATION:
Applicant: Malvar, Thomas
Applicant: Gilmer, Amy Jelen
TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad-Spectrum S-Endotoxins
FILE REFERENCE: MECO:210--2
CURRENT APPLICATION NUMBER: US/09/873, 873
CURRENT FILING DATE: 2001-08-20
PRIOR APPLICATION NUMBER: US 09/253,341
PRIOR FILING DATE: 1999-02-19
PRIOR APPLICATION NUMBER: US 08/922,505
PRIOR FILING DATE: 1997-09-03
PRIOR APPLICATION NUMBER: US 08/754,490
PRIOR FILING DATE: 1996-11-20
NUMBER OF SEQ ID NOS: 35
SOFTWARE: PatentIn version 3.0
SEQ ID NO 25
LENGTH: 3534
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURES:
OTHER INFORMATION: Hybrid Delta-Endotoxin
NAME/KEY: CDS
LOCATION: (1)..(3531)
US-09-873-873-25

Query Match 38.0%; Score 1402; DB 9; Length 3534;
Best Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

Qy 285 TCAGTGGGAATTTTCTTATGACATGTCGAAACCACTTATTAATACAAATTAACGAAA 344
Db 213 TCATATGGAGCGCATTTCTTGTACAAATTAATTAATTAATTAATTAATTAATTAATTA 272
Qy 345 TCGTAGAATATCGGACCTTCTGATTAACAAGTTTGAAGATTCTTTAGAGCTATCA 404
Db 273 CGGTAGAACCAAGCCATTTCTAGATTGAAGACTAAGCAATTTTATCAAAATTTTACGC 332
Qy 405 ACAGTCACTGAAGATTGGCTAGAAAACGATGATGCAAGAACGAAAGTCTTTTA 464
Db 333 AGAATCTTTAGAGAGTGGAGAGACATCTACTAATCCAGATTAAGAGAGAGATGCG 392
Qy 465 TACCAATATATAGCTTATGAACCTGATTTTCTTAATGCAATGCGCTTTTCCGATTA 524
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Db 633 CAATACGAGGATTAAGAGCTGTATAGGAGCCGAGATTTAGAGATTTGATTAAGATTAATCA 692
Qy 765 ATTCGATAGATCTAAGCTTAAAGTATTAAGATCTAGTGGCACTATTTCCCAAGCTATGA 824

Db 693 ATTAGAGAGAAATTAACACTTAATTAAGATATGTTTCTTATTTCCGAATGAGA 752
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Qy 1063 CGGGGACACAAATTCATCTCGGCCAATAGAGCGGATTAATTAACCTCAACGATGCG 1122
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Qy 1662 GCGGTATCGGATGAGAGTGTGTTATGCTGCTCAACAAATGATCTCTGAGGATACGT 1721
Db 1563 AAGGTATCGGCAAGAAATACGCTATGCTCTACACAAATCTAAGATTAATACGTAAGGT 1622
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FEATURE:
OTHER INFORMATION: Hybrid Delta-Endotoxin
NAME/KEY: CDS
LOCATION: (1) .. (3531)
US-09-916-956A-25

Query Match 38.0%; Score 1402; DB 10; Length 3534;
Beet Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

285 TCAGTGGAAATTTTCTAGAACATGCGAACATTAATCAACAAATTAACAGAAA 344
213 TCATGGAGCGCATTTCTGTACAAATTTGAACAGTTAATTAACAAAGAAATTAAGAAATT 272
345 TGTAGGAATACGCGACTTCTCGATTACAGGTTTGAAGATTCCTTTAGAGCTATCA 404
273 CGCTAGGAACCAAGCCATTTCTAGATTAGAGGCTAAGCAATCTTTATCAATTTACGC 332
405 ACAGTCACTTGAAGTTGGCTAGAAAACGCTATGATGCAAGAACGAAAGTTCTTTA 464
333 AGAATCTTTAGAGAGTGGAGACAGATCTCTAATCCAGCATTAAGAGAGAGATGCG 392
465 TACCAATATATAGCCTTAGACTTGTCTTAATGGAAGCGCTTTTGGCAATTAG 524
393 TATTCATTTCAATGACATGAACAGTCCCTTACACCGCTATTCCTTTTGGAGTTCA 452
525 AACCAAGAGTTCAATTATTAATGATATGCTCAAGTCAAGTCAAAATTTACACCTATATT 584
453 AATATATCAAGTTCTCTTTTATCAGATATGTTTCAAGCTGCAAAATTTACATTTATCACT 512
585 ATTGAAGATGCTCTCTTTTGGTATGAATTTGGGCTTACATCGCAGAAATTCACG 644
513 TTGAGAGATGTTTCAAGTGTGTGACAAAGTGGGGATTGATGCCGCACTATCAATAG 572
645 TTATATGAGCGCCAGTGAACAAAGAGATTTATCCGACTATTTGGTAAATGCTA 704
573 TCGTTATATGATTTAATAGCTTATGCGACTATACATACATATGCTGTAGCGTGTGA 632
705 TATATAGAGTCTAATATAGCTTGAAGAGCAAAATGCGCAAGTTGGTGGCTTATATCA 764
633 CATATAGGAGTTAGAGGTGTATGGGAGCCGATTTCTAGAGATTTGATTAAGATATATCA 692
765 ATTCCTAGAGATCTAACGTTAGGGGTATTAATCTAGTGGCACTATTTCCAAAGTATGA 824
693 ATTAAAGAGATTAACACTAATGATATGATGCTTTCTATTTCCGAATATGA 752
825 CACTGCCATTTATCCAAATTAATACAGTGTCACTTAAACAGGAAATTTATACAGCC 884
753 TATGTAAGCGTATCCAAATTCGAACAGTTTCCAAATTAACAGAAATTTATCAAAACC 812
885 A--ATTGAGCAACAGGGGTAAATATGCGAAGTATGAATGATATTAATTAATGACCT 942
813 AGATTTAGAAAATTTTGTATGATGTTTTCGAGGCTGGGCTCAGGCAATAGAAAGATAT 872
943 TCGTTTTCGCTATAGAGACTGCGGTTATCCGAAGCCCGCATCTACTTATTTCTAGAA 1002
873 TAGGAGTCCACATTTATGATGATTAATCTAATCAATTAACATCTAATACGATGCTATAG 932
1003 CAATTTCAATTTTATGAGCACTTATCAGATGAGAGTCTACTAGGCAATATGACTTACTG 1062
933 GGGTATTTTATATGCTCAGGGCATCA-----AATATAGCTTCTCTTAGGGTT 983
1063 CGGGGCGACCAATTTCAATCTCGGCAATAGAGCGGATTAATTAATCTCAACGCAATGG 1122
984 TTGGGGGCGCAATTTCACTTTCCGCTATATGAACTATAGGGA-----ATGCA 1032
1123 TCTACCAATATCTTATTAATCTGTAAAGTATCAATTTCTCTCGAGACGATATTTGG 1182
1033 GCTCCCAACCAAGTATTTGCTCAACTAGTCAAGGCGGTATAGAAACATATATGCTCC 1092
1183 ACTGATTCATATGAGAGAGTCTTATATGGGAATTTACTTGAACCTATATCATGCTGTC 1242
1093 ACTTATATATGAAGACCTTTTAAATATAGGATTAATATCAACACTATCTGTTCTTGAC 1152

1243 CTAATGTTAGATTTAATTTTGAACCCCTCAGAAATACCTTTGAAAGAGTACTGCTAAC 1302
1153 GGGAC-----AGAAATTTGCTTATGAAACCTCTCAAAATTTCCATTCGCTGTATACAGAAA 1208
1303 TATATGCAACCCATATGATGATCACTGGGCTTCAATTAANAATTCAGAAATG--AATTAAC 1361
1209 AACCGGAACGATATTCGCTGTATGATAAATCCGCCACAGAAATTAACACGTGCACCTAG 1268
1362 ACCAGAAACCAACAGAACCAATTAATGATCATATAGCTATAGTTATCTCACATAGG 1421
1269 GCAAGATTTTATGATATGATTAAGCCATTTTCAATGTTTCTG-----TCAGCTTTAG 1322
1422 GCTCAATTTCAATCTAGGGTGCATGACAGATATTTCTTGAAGCAGCCGTAGTGAGA 1481
1323 TAATATGATGATATATTAATAGCTCAATGTTTCTTGAAGCAGCCGTAGTGAGA 1382
1482 TCGTACAAATACATTAATGATGATGATTAACAAATATCCATTTGTAATATCATTTCA 1541
1383 CCTACAAATATCAATTAATGATCCGAGAGATTAATCTCAAAATACATTTGTTAAACACATAC 1442
1542 CTTAATTCAGATACCTGTGATGATGAGCCAGAGATTTTACAGAGGGGATTAATCCG 1601
1443 ACTTCAGTCAAGTATCTATGTTTAAAGGGCCCGGTTTACGAGAGAGATATTTCTTG 1502
1602 AACTAATGTTAATGATGATGATTAATGATGATGATGATGATGATGATGATGATGATGAT 1561
1503 ACAGAACAGTGAAGGACATTTGCTTATATCTATGTTAATTAATTAAGGCAATTAACCCA 1562
1662 GCGGTATCCGCTGAGAGTTGCTTATGCTGCTTCAAAACATGCTCTGAGGTTACTGT 1721
1563 AAGTATCGGCAAGATATGCTATGCTCTCTACCAAAATCTAAGAAATTTACCTAACGCT 1622
1722 CGAGGAGATGATCTTGTATGATCAAGATTCCTTATGATGATGATGATGATGATGATGATGAT 1781
1623 TCGAGGTGAACGATTTTGTCTGTATGATTAACAAACATGATGATGATGATGATGATGAT 1682
1782 GACATCTCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1841
1683 AACTTCATCAATCTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1742
1842 AACTGCT--GGAATATGATTAATGATGATGATGATGATGATGATGATGATGATGATGAT 1898
1743 GAT 1802
1899 AATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1958
1803 AATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1862
1959 AGAGCGGTGAATGCTCTGTTTCTAATACGAATCCAAAGAAATGAAACAGATGATGAC 2018
1863 AAGGCGGTGAATGCTCTGTTTCTAATACGAATCCAAAGAAATGAAACAGATGATGAC 1922
2019 AGATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2078
1923 GATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1982
2079 AGATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2138
1983 GATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2042
2139 AACTTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2198
2043 GATTAATCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2091
2199 TAATGACATGATTTTCAATCTTATTAATGATGATGATGATGATGATGATGATGATGATGAT 2258
2092 -----CTGTGTTGAGAGAGAG 2108
2259 TGAATCAATTAATCAATGAG 2318
2109 TACGATTAATTAATCAATGAG 2168

QY 2319 GGGGACTTTTAAAGAGTGTATCCGACGTAATTTATATCAAAAAATAGAGAGTCCGAAAT 2378
DB 2169 AGGTACCTTTGATGAGAGCTATCCAAATATTTGTATCAAAAAATGATGAATCAAAAT 2228
QY 2379 AAAAGCTTATACCGCTACCAATTAAGAGGTATATTAAGAGATAGCAAGATTAGAGAT 2438
DB 2229 AAAAGCTTATACCGCTATCAATTAAGAGGTATATTAAGAGATAGCAAGATTAGAGAT 2288
QY 2439 ATATTTGATTCGTTATATGCGAAACATGAAACATTTGATTCGAGTATCCGATCCGT 2498
DB 2289 CTAATTTATTCGCTACAAATGCAAAACATGAAACATTTGATTCGAGTATCCGATCCGT 2348
QY 2499 ATGCGCGCTTCACTTTGAAAGCCCAATCGAGAGTCCGGAACCGAATGATCCGAC 2558
DB 2349 ATGCGCGCTTCACTTTGAAAGCCCAATCGAGAGTCCGGAACCGAATGATCCGAC 2408
QY 2559 ACATTTTGAATGGAATTCGATCTAGATTGTTCTCTGAGAGATGGAAGAAATGTCGCA 2618
DB 2409 ACACCTTGAATGGAATTCGATCTAGATTGTTCTCTGAGAGATGGAAGAAATGTCGCA 2468
QY 2619 TCATTCCTCATCTTCTCTTGGATATGATATGATGCAAGACTTGATGAGAAATCT 2678
DB 2469 TCATTCCTCATCTTCTCTTGGATATGATATGATGCAAGACTTGATGAGAAATCT 2528
QY 2679 AGCGGTGCTGCTGATTAAGATTAAGACGCGAGAAAGTCTAGTCAAGACTGAGAAATCT 2738
DB 2529 AGCGGTGCTGCTGATTAAGATTAAGACGCGAGAAAGTCTAGTCAAGACTGAGAAATCT 2588
QY 2739 GGAATTTATGAGAGAAACATTAATTAAGAGAAAGCACTGCTCGTGTGAAGAGAGAGA 2798
DB 2589 AGAGTTCTGAGAGAGAAACATTAATTAAGAGAAAGCACTGCTCGTGTGAAGAGAGAGA 2648
QY 2799 GAAAAATGAGAGAGAAACATTAATTAAGAGAAAGCACTGCTCGTGTGAAGAGAGAGA 2858
DB 2649 GAAAAATGAGAGAGAAACATTAATTAAGAGAAAGCACTGCTCGTGTGAAGAGAGAGA 2708
QY 2859 GCGAAAAAGACTGTGATCTTATTTGATGATTCCTCAATTAATTAAGATTAAGAGAGAGA 2918
DB 2709 GCGAAAAAGACTGTGATCTTATTTGATGATTCCTCAATTAATTAAGATTAAGAGAGAGA 2768
QY 2919 TACAAACATTTGAGATGATTAATGCGGAGATTAATCTGTTATGAGATTCGAGAGAGCTTA 2978
DB 2769 TACAAACATTTGAGATGATTAATGCGGAGATTAATCTGTTATGAGATTCGAGAGAGCTTA 2828
QY 2979 TCTGTCAAGATTAATCTGTTATTCGCGGTGTAAATGCGGAAATTTTGAAGATTTAGAGAG 3038
DB 2829 TCTGTCAAGATTAATCTGTTATTCGCGGTGTAAATGCGGAAATTTTGAAGATTTAGAGAG 2888
QY 3039 TCGCATTTATCACTGCAATTCCTCTATTCGATTCGAGAGAAATGTCGTTAAATGTCGATTT 3098
DB 2889 GCGTATTTTCACTGCAATTCCTCTATTCGATTCGAGAGAAATGTCGTTAAATGTCGATTT 2948
QY 3099 TAATTAATGATTAATGATGCTGGAATGTAAGAGGCGATGATGT---ACAAAGAGAGCA 3155
DB 2949 TAATTAATGATTAATGATGCTGGAATGTAAGAGGCGATGATGT---ACAAAGAGAGCA 3008
QY 3156 TCAACGTTCTGCTCTGTTATTCGCAAGATGGAAGAGAGATGTCACAGAGATTCGCT 3215
DB 3009 CCAACGTTCTGCTCTGTTATTCGCAAGATGGAAGAGAGATGTCACAGAGATTCGCT 3068
QY 3216 CTGTCCGCGGTGCTGATTAATCTCTCGGTGCAAGCGTACAAAGAGAGATTTAGAGAGAG 3275
DB 3069 CTGTCCGCGGTGCTGATTAATCTCTCGGTGCAAGCGTACAAAGAGAGATTTAGAGAGAG 3128
QY 3276 TTGTGTATGATTCATGATTAATGCAAGCAATTAAGAGAGATTTAAATTTAAATCTGTA 3335
DB 3129 TTGTGTATGATTCATGATTAATGCAAGCAATTAAGAGAGATTTAAATTTAAATCTGTA 3188
QY 3336 AGAAGAGAGATGATTCAAAGAGATTAAGAGAGAGATTTAAATTTAAATCTGTA 3395
DB 3189 AGAAGAGAGATGATTCAAAGAGATTAAGAGAGAGATTTAAATTTAAATCTGTA 3248
QY 3396 TACAGACGATGATTAATTCGCTAAATGCTGATTAAGAGATGATTAAGAGATTTAAATCTGTA 3455

DB 3249 AGAATACGAGAGGTGCT-----ACACTTCTGATATCGAGAGATTAAGAGAGCTCTTC 3302
QY 3456 AGCATCTGTTAATTAACAAACGACTTATGAGAGAGAGAGATTAAGAGAGATTAAGAGAG 3515
DB 3303 CGTACAGCTGATTAATGCTGATGATTAAGAGAGAGATTAAGAGAGATTAAGAGAGAG 3362
QY 3516 TAATCTTGTGATTAATGAGAGAGATTAAGAGAGATTAAGAGAGATTAAGAGAGATTA 3575
DB 3363 GATCTCTGATTAATTAAGAGAGATTAAGAGAGATTAAGAGAGATTAAGAGAGATTA 3422
QY 3576 GACAAAGAGATTAATTAAGATTAATTAAGAGAGATTAAGAGAGATTAAGAGAGATTA 3635
DB 3423 GACAAAGAGATTAATTAAGATTAATTAAGAGAGATTAAGAGAGATTAAGAGAGATTA 3482
QY 3636 GAGAGAGAGATTAATTAAGATTAATTAAGAGAGATTAAGAGAGATTAAGAGAGATTA 3687
DB 3483 GAGAGAGAGATTAATTAAGATTAATTAAGAGAGATTAAGAGAGATTAAGAGAGATTA 3534

RESULT 12
US-09-997-914-25
; Sequence 25, Application US/09997914
; Publication No. US20030119158A1
; GENERAL INFORMATION:
; APPLICANT: Malvar, Thomas
; APPLICANT: Gilmer, Amy Jelen
; TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad Spectrum d-Endotoxins
; FILE REFERENCE: 11792.0215 DVS01 MECO:215--1
; CURRENT APPLICATION NUMBER: US/09/997,914
; CURRENT FILING DATE: 2001-11-30
; PRIOR APPLICATION NUMBER: US 09/261,040
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: US 08/754,490
; PRIOR FILING DATE: 1996-11-20
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 25
; LENGTH: 3534
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Hybrid Delta-Endotoxin
; NAME/KEY: CDS
; LOCATION: (1)..(3531)
; US-09-997-914-25

Query Match 38.0%; Score 1402; DB 10; Length 3534;
Best Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

QY 285 TCAGTGGAAATTTCTAGACATGTCGAAACATTAATTAATCAACAAATTAAGAGAGAA 344
DB 213 TCATGAGAGAGATTTCTGTAACAATTAAGAGAGATTAATTAACAAAGATTAAGAGAT 272
QY 345 TGTAGAGATTAAGAGATTTCTGATTAAGAGATTAAGAGATTTCTGATTAAGAGATTA 404
DB 273 CGCTAGAGAGATTAAGAGATTTCTGATTAAGAGATTAAGAGATTTCTGATTAAGAGAT 332
QY 405 ACAGTCACTTAAGATTTGCTGTAAGAGAGATTAAGAGATTTGCTGTAAGAGATTTGCT 464
DB 333 AGATCTTTTGAAGAGATTTGCTGTAAGAGAGATTTGCTGTAAGAGATTTGCTGTAAGAG 352
QY 465 TACCAATATATGCTTGAAGATTTGCTGTAAGAGATTTGCTGTAAGAGATTTGCTGTAAG 524
DB 393 TATTCATTAATTAAGATTAAGAGATTTGCTGTAAGAGATTTGCTGTAAGAGATTTGCT 452
QY 525 AAACAAAGAGATTTCAATTAATTAAGATTTGCTGTAAGAGATTTGCTGTAAGAGATTT 584
DB 453 AAATTAATTAAGATTTCAATTAATTAAGATTTGCTGTAAGAGATTTGCTGTAAGAGAT 512
QY 585 ATTAGAGATGCTCTCTTTTGTAGATTAATTTGGGCTTAATTCGAGAGATTTCAAG 644

Db 513 TTGAGAGATGTTTCACTGTTTGGACAAAGTGGGGAATTGATGCCGCACTATCATAG 572
Qy 645 TTAATATGACCGCCAGAGTGGACAAACGAGAGATTATTCGACTATTTGGCTAGATGTA 704
Db 573 TCGTTATTAATGATTTAACTAGAGCTTATTTGGCACTATACAGATCATGCTGTAACCTGTA 632
Qy 705 TAATACAGCTCTAATATGCTTGAGAGGACAAATGCCGCAAGTTGGGTGGCTTATATCA 764
Db 633 CAATACCGGATTTAGAGCGTGTATGGGACCGGATTTAGAGATTGAGATTAAGATTAATCA 692
Qy 765 ATTCCGTAGAGATCTAATGTTAGGGGTATTAGATCTAGTGCATATTTCCCAAGCTATGA 824
Db 693 ATTAGAAGAGATTAACTACTGATTTAGATGATGCTTTCTTATTTCCGAACTATGA 752
Qy 825 CACTCGACTTATTCATTAATAATACAGTGTCACTTAACAAGGAGTTTATACAGCGC 884
Db 753 TAGTAGAACGTATTCATTCGAAACAGTTCCCAATTAACAAGAAATTTATACAAACCC 812
Qy 885 A--ATTGAGACCAACAGGGGTAAATATAGCAAGTATGAAATTTGATTAATATATGCACT 942
Db 813 AGTATTAAGAAATTTTGTATGATGATTTTCAAGGCTCGCTCAAGGCAATAGAAAGATAT 872
Qy 943 TCGTTTCCGCTATAGAGACTGGGGTTATCGAAAGCCGCACTACTGATTTCTAGAA 1002
Db 873 TAGAGTCCCAATTTGATGATATCTTAACAGATTAACATCTATACGATGCTCATAG 932
Qy 1003 CAATTAACAATTTTACACTTCACAGATGAGTCTACTAGGCACTATGACTTACTG 1062
Db 933 GGGTATATATATATGTCAGGGGATCA-----AATATGGCTTCTCTGTAGGGTT 983
Qy 1063 CGGGGCAACATTCATCTCGGCCAATAGAGGCGGATTAATATACCTCAAGCATGG 1122
Db 984 TTGGGGCCGAAATTCATCTTCCGCTATATGMACTATGGA-----ATGCA 1032
Qy 1123 TCTACCAATCTCTATTAATCCGTATAGATATCATCTTCTCTGAGAGTATATGG 1182
Db 1033 GCTCCACAAACAGATATGTTGCTCACTAGTCAAGGCGGTATTAACAATATGCTCC 1092
Qy 1183 ACTGAATCATATGACAGAGAGTCTTATAGGGAAATTTACCTGAACCTATTCATGATGTC 1242
Db 1093 ACTTATATATAGAACCTTTTAAATATAGGATTAATATCAACACATATCTGTTCTTGAC 1152
Qy 1243 CCTACTGTTAGATTTAATTTTAGAACCTCAAGATATCTTTGAAAGAGTACTGCTAAC 1302
Db 1153 GGGAC-----AGAAATTTGCTTATGMACTCTCAAAATTTGCCATCCGCTATATACAGAAA 1208
Qy 1303 TATATGCAACCCATGAGTCACTCGGGCTCAATTAAGATTCAGAAATCG--AATTACC 1361
Db 1209 AAGCGAACGATGATTCGCTGATGAATAACCGCCACAGAAATTAACAAGTCCACCTAG 1268
Qy 1362 ACCGAAACAAACAGAACGACCAATTAATGATCATATAGTCATAGTTATCTCAATAG 1421
Db 1269 GCAAGGATTTAGCATGATTTAGCCATGTTTCAATGTTTCG-----TCAGGCTTTAG 1322
Qy 1422 GCTCATTTCAAACTTAGGGTGCATGACAGATATTTCTTGAACGCAACGATAGTACGA 1481
Db 1323 TATATAGTATGATATTAATTAAGAGTCCAAATGTTTCTTGAACGCAACGATAGTAC 1382
Qy 1482 TCGTACAAATACATTAATGTTCAATATGATCAATACAAATACCTTGTATAATCATTTCA 1541
Db 1383 CCTTACAAATACATTAATGATTCGAGAGGATTTACTCAAAATACATTTGTAAACACATAC 1442
Qy 1542 CCTTAATTCAGTACCTGTAGTCAAGTGGCCAGAGATTACAGAGAGGAGTAAATCCG 1601
Db 1443 ACTTACGTACGTATCTACTGTTTGAAGAGGCCGGGTTTACGAGAGATATTTCTTGG 1502
Qy 1602 AACTAAAGTTAATGATGATCTAAGATAGGCTTTAATTTTAAATATACATCAATTA 1661
Db 1503 ACCAACAAGTGAAGACCATTTGCTTATATCTATTTGTTAATATATGGCAATTAACCCA 1562
Qy 1662 GGGTATTCGGTATGAGATTCGTTATGCTGTTCTCAACAACATGCTGAGGGTAACTGT 1721
Db 1563 AAGGTATTCGTAAGAAATACGTATGCTCTACTACAAATCTAAGAAATTTACGTAAACGGT 1622

Qy 1722 CGAGGAGTACTACTTTTGTATCAAGGATTCCTTAGTACTATATGATGCCAATGATCTTT 1781
Db 1623 TGCAGGTGAACGAGATTTTCTGCTGATCAATTAACAAACATATGATACCGGTGACCATTT 1682
Qy 1782 GACATCTCATATTTATGATTTTGGAGAAATTTCCGTAGATATTTAGTATGATCTGCAGTCA 1841
Db 1683 AACATTCCAATCTTTATGATTAACGCAATTAATAACGCTTTTACATTCCTCAATGACCA 1742
Qy 1842 AACTGCT---GGAATAAGTATTAAGTATTAATGACAGTACCAACGTTTCACTTGATTA 1898
Db 1743 GAGTATGTTACAGTATGCTGATCTTATTTAGTTACGGAGAAATGAAATTTATATAGCAG 1802
Qy 1899 AATTGAATTCATTCCAATTAATCTGCAACCTTGAAGCAGAAATACATTTAGAAAGGCGCA 1958
Db 1803 AATTGAATGATTCAGTACTGATCAATTTGAAGCAGAAATATGATTTAGAAAGACACA 1862
Qy 1959 AGAGCGGTGAATGCTGTTTACTATATAGAAATCCAAAGAAATTTGAAAACAGATGAC 2018
Db 1863 AAGGCGGTGAATGCGCTGTTTACTTATTAACCAAAATGGGATTAACCAAGATGAC 1922
Qy 2019 AGATTAATCATTTGATCAAGTATCCAAATTTATAGTGGCGTGTATTCGATGAATTCGCTT 2078
Db 1923 GATTAATCATATTTGATCAAGTATCCAAATTTATAGTATGTTTATCAGATGAATTTGCTT 1982
Qy 2079 AGATGAAGAGAGAAATTTACTTGAAGAAATGAAATATGCCAAACGACTCAGTATGAAG 2138
Db 1983 GATGAAGAGAGAAATTTGTCGAGAAAGTCAAAACATGCCAAGGACTCAGTATGAGCG 2042
Qy 2139 AAATTAATCTCAAGATCCAAATTCATCATCATATACAAACAGACTTCATATCTAC 2198
Db 2043 GAATTAATCTCAAGATCCAAATTCCAAGGACATCAATAGGCAACTGAC----- 2091
Qy 2199 TAATGAGCATGGAATTTGATCATCTATCCATGAACATCTGAACATGAGAGTGGGAG 2258
Db 2092 -----CGGTGAGAGAGAG 2108
Qy 2259 TGAGAACATTAATCCAGAGAGAAATGACGATTTTAAAGAAATTTACCTCAACTAC 2318
Db 2109 TAGGAATTAATCATCCAAAGAGAGATGACGATTTCAAGAAATTTATGTACACATAC 2168
Qy 2319 GGGGACTTTAATGATGTTATTCGACGATATTTATATCAAAATAATGAGAGTGGAAAT 2378
Db 2169 AGGTACTTTGATGAGTGTATCCAAATTTGTATCAAAATATCATGAATCAAAAT 2228
Qy 2379 AAAAGCTTAATCTCGCTACCAATTAAGGGGTATTTGAAGATATGTCAAAGATTAAGAT 2438
Db 2229 AAAAGCTTTACCGGTATCAATTAAGGGGTATATCGAAATGTCMAACATTAAGAAAT 2288
Qy 2439 ATATTTGATTCGTTATATGCGAAACATGAAACATTTGATGTTCCAGGTACCGAGTCCGT 2498
Db 2289 CATTTATATTCGTTACATGACAAAGACATGAACATGAATATGTCAGAGTACGGGTTCTT 2348
Qy 2499 ATGGCGGCTTCACTTGAAGGCCAATTCGAGAGTGGGAGAACCGAATGATGCGCAC 2558
Db 2349 ATGGCGGCTTCAAGCCCAAAGTCCAAATCGGAAGTGGAGAGCCGAATGATGCGGCGC 2408
Qy 2559 ACATTTGAATGGAATCCGATCTAGATGTTCTCTCAAGATGAGGAGAAATATGTGGCA 2618
Db 2409 ACACCTTGAATGGAATCCGATCTAGATGTTGTTGTATGAGGATGAGGAGAAAGTGTGCCA 2468
Qy 2619 TCAATCCCATCATTTCTCTTTGATATTTGATATTTGATGACAGACTTGCATGAGAACT 2678
Db 2469 TCAATTCGATCATTTCTCTTTGATATTTGATATTTGATGATGATGATGATGATGATGAT 2528
Qy 2679 AGCGTGTGGGTGATTTCAAGATTAAGACGAGAAAGTCAATGAGCAAGCTAGAGGAATCT 2738
Db 2529 AGGTATATGGGTATCTTTAAGATTAAGACGCAATGAGGCAAGCAAGCTAGAGGAATCT 2588
Qy 2739 GGAATTTATTTGAAGAAACATTAATTTAGAGAGAACTGTCTGTGTGAAGAGACAGA 2798
Db 2589 AAGTTCCTCGAAGAAACCATTTAGTATGAGAGAGCGTATGCTGTGTGAAGAGACGGA 2648

QY 2799 GAAAAATGAGAGACAAACGTGAAAACTCAATTGAAAAACAAACGATATATACAG 2858
DB 2649 GAAAAATGAGAGACAAACGTGAAAACTGAAAAACAAATATCTTTATTAAGA 2708
QY 2859 GGGAAAAAGAGCGTGGAGTCTTATTTGATGATTCCTCAATATATATGATTAACCGGA 2918
DB 2709 GGGAAAAAGAGCGTGGAGTCTTATTTGATGATTCCTCAATATATGATTAACCGGA 2768
QY 2919 TACAAACATTTGCGATGATTCATGCGGAGATTAACCTTTGATGATTCGAGAGGCTTA 2978
DB 2769 TACGAATATTTGCGATGATTCATGCGGAGATTAACCTTTGATGATTCGAGAGGCTTA 2828
QY 2979 TCTGTGAGATTAATCTGTTATCCCGGCTGTAATTCGGAATTTTGAAGATTAAGAAG 3038
DB 2829 TCTGTGAGATTAATCTGTTATCCCGGCTGTAATTCGGAATTTTGAAGATTAAGAAG 2888
QY 3039 TCGCATATACATGCAATCTCCCTATACATGCGAGAAATGCTGTTAAAAATGCTATTT 3098
DB 2889 GCGTATTTTCACTGCAATCTCCCTATATGATGCGAGAAATGCTATTTAAAAATGCTATTT 2948
QY 3099 TAATATGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3155
DB 2949 TAATATGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3008
QY 3156 TCAACCTTCTGCTCTGTTATCCCAAGATGGAAGCAAGATGCTCAACAGAGCTTGGCT 3215
DB 3009 CCAACCTTCTGCTCTGTTATCCCAAGATGGAAGCAAGATGCTCAACAGAGCTTGGCT 3068
QY 3216 CTGTCCGGGGCGTGGCTATCTCTCGGTGTCACAGCGTCAAAAAGGAGATGATGAGAGCG 3275
DB 3069 CTGTCCGGGGCGTGGCTATCTCTCGGTGTCACAGCGTCAAAAAGGAGATGATGAGAGCG 3128
QY 3276 TTGTGTACGATCCATGAAATCGAAGCAATACAGAGCACTAAATTTAAAACTGTGA 3335
DB 3129 TTGCGTACCATTCATGAGATCGAAGCAATACAGAGCACTAAATTTAAAACTGTGA 3188
QY 3336 AGAAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3395
DB 3189 AGAAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3248
QY 3396 TAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3455
DB 3249 AGAATGAGAGAGTGGCT-----ACACTTCTCGTATCGAGATATACAGAGCTCTTC 3302
QY 3456 AGCATCTGTTAATTAACAACCGACTTATGAAAGAAACGATATACAGATGATGAGAGAG 3515
DB 3303 CGTACACGCTGATTAATGCGTCACTATGAAAGAAATCGTATACAGATGAGAGAGAG 3362
QY 3516 TAATCATTTGATTAATGAGAGAGGATGATGATTAATCAACCACTACAGCTGTTATAT 3575
DB 3363 GAATCTCTTGTGAATTAACAGAGGATTAAGGATTAACCGCACTACAGCTGTTATATG 3422
QY 3576 GAAAAAGATTAATGATTAATCCAGAAACCGATTAAGTATGATGATGATGATGATGATGAT 3635
DB 3423 GAAAAAGATTAATGATTAATCCAGAAACCGATTAAGTATGATGATGATGATGATGATGAT 3482
QY 3636 GGAAGGAGATTAATGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3687
DB 3483 GGAAGGAGATTAATGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3534

RESULT 13
US-10-365-645-25
; Sequence 25, Application US/10365645
; Publication No. US20030182682A1
; GENERAL INFORMATION:
; APPLICANT: Malvar, Thomas
; APPLICANT: Gilmer, Amy Jelen
; TITLE OF INVENTION: Antibodies Immunologically Reactive with Broad-Spectrum
; TITLE OF INVENTION: Delta-Endotoxins (Amended)
; FILE REFERENCE: 11792, 0210 DUS02 (MECO:210--3)
; CURRENT APPLICATION NUMBER: US/10/365,645
; CURRENT FILING DATE: 2003-02-12

; PRIOR APPLICATION NUMBER: US 09/873,873
; PRIOR FILING DATE: 2001-06-04
; PRIOR APPLICATION NUMBER: US 09/253,341
; PRIOR FILING DATE: 1999-02-19
; PRIOR APPLICATION NUMBER: US 08/922,505
; PRIOR FILING DATE: 1997-09-03
; PRIOR APPLICATION NUMBER: US 08/754,490
; PRIOR FILING DATE: 1996-11-20
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 25
; LENGTH: 3534
; TYPE: DNA
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Hybrid Delta-Endotoxin
; NAME/KEY: CDS
; LOCATION: (1)..(3531)
US-10-365-645-25

Query Match 38.0%; Score 1402; DB 16; Length 3534;
Best Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

QY 285 TCAATGGGAAATTTCTTGAACATGTCGACACTTAATTAATCAACAAATACAGAAA 344
DB 213 TCAATGGGAGCGATTTCTTGAACATGTCGACACTTAATTAATCAACAAATACAGAAAT 272
QY 345 TCGTAGAAATGAGCGACTGCTGATTAACAGGATTTAGAGATTTCCCTTAAGACCTATCA 404
DB 273 CGCTAGAAACCAAGCCATTTCTTGAACATGTCGACACTTAATTAATCAACAAATACAGAAAT 332
QY 405 ACAGTCACTTGAAGATGCTGAGAAACCGTGAATGAGAGAGAGAGAGAGTCTTTA 464
DB 333 AGATCTTTTGAAGATGAG 392
QY 465 TACCAATATATAGCTTGAAGACTTATTTCTTAATGAGAGAGAGAGAGAGAGAGAGAG 524
DB 393 TATTCATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 452
QY 525 AAAAGAGAGATTCATTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 584
DB 453 AAATTAATCAAGTCTCTTTTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 512
QY 585 ATTGAGAGATGCTCTCTTTTGTGATGATGATGATGATGATGATGATGATGATGATGATGAT 644
DB 513 TTGAGAGAGATTTTCAAGTGTGATGATGATGATGATGATGATGATGATGATGATGATGAT 572
QY 645 TTATTAATGAGCGCAAGTGAACAAACAGAGATTAATCCGACTATTTGCTAGATGATG 704
DB 573 TCGTTAATTAATGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 632
QY 705 TAATTAAGGCTTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 764
DB 633 CAATTAAGGCTTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 692
QY 765 ATTCGATGAGATTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 824
DB 693 ATTTAGAGAGATTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 752
QY 825 CACTGCACTTAATTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 884
DB 753 TAGTAGAGATTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 812
QY 885 A--ATTGAG 942
DB 813 AGTATTAAGAT 872
QY 943 TCGTTTCCGCTATGAT 1002
DB 873 TAGAGATGAT 932

Db 3009 CCACGTTGGCTCTTGTGTTCCGGAATGGAGCAAGAGTCAACAAGTTGCTGT 3068
Qy 3216 CTGTCCGGGCGGTGATATCTCCGTGCACAGCGTACAAAGAGGATATGAGAGG 3275
Db 3069 CTGTCCGGGCGGTGATATCTCCGTGCACAGCGTACAAAGAGGATATGAGAGG 3128
Qy 3276 TTGTGTACGATCTCAATGAAATCGAAGCAATACAGAGCAATTAATTTAAACTGTGA 3335
Db 3129 TTGCGTAACCATTCATGAGATGAGAACATACAGAGCAATGAGTTAGCAACTGCGT 3188
Qy 3336 AGAAGAGGAAGTGTATCCAAAGATACAGAGCGTGTATGATTAATCTGACACAGAG 3395
Db 3189 AGAAGAGGAAGTGTATCCAAATACAGAGCGTGTATGATTAATCTGATTAATCAAG 3248
Qy 3396 TACAGCAGATGTATATCCGTAATGCTGATATGAGATGATGATGAAAGTTATATAC 3455
Db 3249 AGAATACGAGGTGCGT-----ACACTTCTCGTAATCGAGATATATACAACTGCTTC 3302
Qy 3456 AGCATCTGTATATTAACAACCGCATTTATGAAGAAAGAAAGTATACAGATGAGAGCA 3515
Db 3303 CGTACAGCTGATTAATGCGTCACTATGAAAGAAATCGTATACAGATGAGAGAGAG 3362
Qy 3516 TAATCATTTGTAATGACAGAGGATGTGAAATTAATCCACCACTACAGCTGTTATAT 3575
Db 3363 GAATCTTGTGAATTTAACAAGAGGTATAGGATTAACAGCCCATACAGTTGTTATGT 3422
Qy 3576 GACAAAAGATTAAGATTAATCTCCAGAAACGATTAAGTATGATGATGAGAGAAC 3635
Db 3423 GACAAAAGATTAAGATTAATCTCCAGAAACGATTAAGTATGATGATGAGAGAAC 3482
Qy 3636 GGAAGGAGATTTATTTGTATACAGCGTGTGAATTAATCTCTTATGAGAGATAG 3687
Db 3483 GGAAGGAGATTTATTTGTATGATGAGCGTGTGAATTAATCTCTTATGAGAGATAG 3534

RESULT 14
US-10-672-163-25
; Sequence 25, Application US/10672163
; Publication No. US20040093637A1
; GENERAL INFORMATION:
; APPLICANT: Malvar, Thomas
; APPLICANT: Gilmer, Amy Jelen
; TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad Spectrum
; TITLE OF INVENTION: delta-Endotoxins
; FILE REFERENCE: 11792.0215, DUS02 MECO:215--2
; CURRENT APPLICATION NUMBER: US/10/672.163
; CURRENT FILING DATE: 2003-09-26
; PRIOR APPLICATION NUMBER: US 09/997,914
; PRIOR FILING DATE: 2001-11-30
; PRIOR APPLICATION NUMBER: US 09/261,040
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: US 08/754,490
; PRIOR FILING DATE: 1996-11-20
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: Patent version 3.2
; SEQ ID NO 25
; LENGTH: 3534
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hybrid Delta-Endotoxin
; NAME/KEY: CDS
; LOCATION: (1)..(3531)
US-10-672-163-25

Query Match 38.0%; Score 1402; DB 17; Length 3534;
Best Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

Qy 285 TCAGTGGGAATTTTCTAGAACATGTCGAACAACTTAATTAATCAACAATTAACAGAAA 344
Db 213 TCATGTGGAGCGCATTTCTGTGAATAATTAACGTTAATTAACCAAGAAATAGAAATTT 272

Qy 345 TCTTAGAATATAGGCACTTGCTGCATACAGAGTTTAGAGATTCCTTTAGAGCCTATCA 404
Db 273 CCTTAGAATCAAGGCATTTCTAGATTAAGAAAGATTAACCAATCTTTAACAATTTACG 332
Qy 405 ACAGTCACTTGAAGATTTGCTAGAAAACCGTATGATGCAAGAACAGAGATGTTCTTTA 464
Db 333 AGAATCTTTTAGAGATGAGGAAGCAGATCTTAATTAATCAAGATTAAGAGAAAGATGG 392
Qy 465 TACCAATATATAGCCTTAGAACTGATTTCTTAATGAGATGCGCTTTTGGCAATTAG 524
Db 393 TATTCATTTCAATGACATGAACAGTGCCTTAACAACCGCTATTCCTTTTGGCAATTA 452
Qy 525 AAACCAAGAAAGTTCCATTAATTAATGATTAATGCTCAAGCTGAGAAATTAACCTATTA 584
Db 453 AAATATCAAGTTCCTTTTATCAAGTATATGTTCAAGGTGCAAAATTAATTAATCAAG 512
Qy 585 ATTGAGATGCGCTCTTTTGTGTAGTAATTTTGGGCTTAATCGCAGAGAAATTCACAG 644
Db 513 TTGAGAGATGTTTCAAGTGTGAGCAAGGTGGGATTTGATGCGGCACTATCAATAG 572
Qy 645 TTATATGAGCGCCAGAGTGAACAAACGAGATTAATTCGACTATTTGCGTGAATGTA 704
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Qy 705 TAATACAGCTTAATATGCTTGAGAGGACAAATGCGCAATTTGGGTGCGTTATATCA 764
Db 633 CAATACGGATTAAGACCGGTATGAGGACCGAATTCAGATGAGATTAAGATTAATCA 692
Qy 765 ATTCCGTAGAGATCTTAACGTTAGGGGTATTAAGATCTAGTGCACATTAATCCAGATGTA 824
Db 693 ATTTAGAGAGATTAATTAACCTAATCTATTAATTAATGATTCGTTTCTATTTCCAGACTATGA 752
Qy 825 CACTGCACTTAATCCAAATTAATACAGAGTCTCACTTAACAGAGAAATTTATACAGAG 884
Db 753 TGTAGAAAGTATCCAAATTCGAACAGTTTCCCAATTAACAGAGAAATTTATCAAAACC 812
Qy 885 A--ATTGAGCAACAGGGTAAATATGCAAGTATGAATTTGATTAATTAATGACCT 942
Db 813 AGTATTAAGAAATTTTGTATGATGATTTTGAAGCTCGGCTCAGGGCATTAAGAAAGTAT 872
Qy 943 TCGTTTCCGCTATGAGACCTGGGTATCCGAGCCGCACTTACTTATTTCTAGAA 1002
Db 873 TGGAGTCCACATTTGATGATTAATTAATTAACATTAACATTAATTAATGATCTCATAG 932
Qy 1003 CAACTTAATTAATTTAGCACTTCATCAACAGATGAGTCTACTAGGATATGACTTACTG 1062
Db 933 GGGTTATTAATTAATGATGAGGATCA-----ATTAATGCTTCTCTGTAAGGTT 983
Qy 1063 CCGGGGCAACAATTAATCTCGGCCAATTAAGAGGCGGATTAATTAATCTCAACGATGG 1122
Db 984 TTGCGGGCCAGAAATTAATCTTCCTTAATTAAGAACTATAGGAA-----ATGCA 1032
Qy 1123 TCTAACCAATTAATTTATTAATCTGTAAGTATTAATTAATCTTCTCGAGAGTATATGG 1182
Db 1033 GCTCCACAACAACGATTAATGTTGCTCAATAGGTCAAGGGGTGATTAAGAACTATAGTCC 1092
Qy 1183 ACTGAATCATATGACAGAGTGTCTTAATGAGGAAATTAATCACTTAACCTTAATGATGTC 1242
Db 1093 ACTTAATTAAGAAAGCTTTTAATTAATTAAGGATTAATTAACAACATATCTGTTCTGAC 1152
Qy 1243 CCTAGTGTATGATTAATTTAGAAACCTCAGAAATTAATTTGAAGAGGATCTGCTAAC 1302
Db 1153 GGGAC-----AGATTTGCTTAATGAGAACTTCCTCAAAATTTGCCATCCGCTTAATACAGAA 1208
Qy 1303 TATATCAACCCATATAGTCACTGCGCTTCAATTAAGATTCAGAACTG--AATTAC 1361
Db 1209 AACCGAAGCGTATGATTCGTGATTAATTCGCCACAGATTAACACGTGCACTAG 1268
Qy 1362 ACCAGAAACAACAGAGCAACAAATTAATGATTAATGATCATAGTATGATCTCAATAG 1421
Db 1269 GCAAGATTTATGATCAATGATTAAGCATATTTCAATGTTTCG-----TCAAGCTTTAG 1322

QY 1422 GCTCATTTACAACTAGGGTGCATGTAACGATATATCTTGGACGACCGGTAGTGCAG 1481
Db 1323 TAATAGTAGTGAATGATTAATAGAGCTCAATGTTTTCTTGGACGACCGGTAGTGCAC 1382
QY 1482 TCGTACAAATACCTTAGTTCAGATAGCATPAACAATAACCATTTGGTAAATGATTCAA 1541
Db 1383 CCTACAAATACCAATTAATTCGGAGAGATTACTCAAAATACCATTTGGTAAAGACATAC 1442
QY 1542 CCTTAATTCAGTACCTCTGTAGTCAGTGGCCAGATTTACAGAGAGGATATATATCCG 1601
Db 1443 ACTTCAGTCAGTACTGTTGTATAGAGGGCCCGGGTTTACGGAGAGATATCTTCG 1502
QY 1602 AACTACGTTAATGATGATGATCACTAATAGGGCTTAATTTTAATATACATATTAACA 1661
Db 1503 ACCAAACAGTGAAGGACCATTTGCTTAATCTAATTTAATAAATGGCAATTAACCCA 1562
QY 1662 GCGGTATCGGTGAGATGCTGTTATGCTGCTCTCAACAATGGTCCGAGGGTATCGT 1721
Db 1563 AAGGTATCGTCAAGAAATACGCTATGCTCTTACTCAAAATCTAAGAAATTAACGTACGGT 1622
QY 1722 CGAGGGAGTACTACTTTTGAATCAAGATTCCTTAGTACTATGATGCAATGATCTTT 1781
Db 1623 TGCAGGTGAACGATTTTTTGTGTGCAATTTAACAAACAAATGATACCGGTGACCAAT 1682
QY 1782 GACATCTCATCTATTGATTTGAGAAATTTCCGTAGTATTAAGTCAATCTGCGACTCA 1841
Db 1683 AACATTCCAATCTTTATGTTAGTACGCACTAATTAATACGCTTTTACATTCCTCAATGACCA 1742
QY 1842 AACGTCT---GGAATAGTAAATGATTAATTAATGACGATGACAAACGTTTCACTTGTATA 1898
Db 1743 GAGTATGTTCAACGTAAGGTGCTGATCTTTAGTTACGAGAAATGAATTTATATAGCAG 1802
QY 1899 AATTGAATTCATTCAATTAATCTGCAACCTTGAAGAGAAATACGATTTAGAAAGGCGCA 1958
Db 1803 ATTTGAATGATTCAGTACTGATGATGCAATTTGAAGAGAAATGATTTAGAAAGACACA 1862
QY 1959 AGAGGGGTGAATGCTCTGTTTACTAATACGAATCCAAAGAAATGTAAGAAACAGATGTAC 2018
Db 1863 AAAAGGGGTGAATGCGTGTATTCTCTATTAACCAAAATAGGGAATAAAACAGATGTAC 1922
QY 2019 AGATTATCATATTGATCAAGTATCCAAATTTAGTGGCGTGTATTACGATGAATTCGCTT 2078
Db 1923 GGAATATCATATTGATCAAGTATCCAAATTTAGTGGATTTGTTATCAATGAATTTGTCT 1982
QY 2079 AGATGAAGAGAGAAATTAATCTGGAAGAAATGAAATATCGAAACGACTCAGTATGAAG 2138
Db 1983 GAGTGAAGAGAGAAATGTCGGAAGAAATGCAAAACATGCGAAGCACTCAGTATGAGCG 2042
QY 2139 AATCTTACTCAGATTCCAAATCTTCAATCCATCAATAGCAACAGACTTCATATCTAC 2198
Db 2043 GAATTTACTTCAAGATTCCAAATCTTCAAGGCACTCAATAGGCAACTAGAC----- 2091
QY 2199 TATAGCAATGCAATTTTCACTATCTATCCATGAAACATCTGAAACATGATGTTGGGAG 2258
Db 2092 -----CGTGGTTGGAGAGAG 2108
QY 2259 TGAGAACATTTACATCCAGAGAGAAATGAGTATTTAAGAGAAATTAACCTCACACTAC 2318
Db 2109 TACGATATTTACATCCAAAGAGAGATGACGTATTCAAAGAAATTTATGTCACTAC 2168
QY 2319 GGGGACTTTTAAATGAGTGTATTCGACGATATTTATCAAAATAATGAGAGTCCGAAAT 2378
Db 2169 AGGTATCTTTGATGATGATGCTATCCAAATATTTGTATCAAAATAATGATATCAAAAT 2228
QY 2379 AAAAGCTTAACTCGCTACCAATTAAGAGGGTATATTGAAGATATGTCAGATTTAGAT 2438
Db 2229 AAAAGCTTAACTCGCTATCAATTAAGAGGGTATATGAAAGATATGTCAGATTTAGAAAT 2288
QY 2439 AATATTGATTCGTTAATGATGAGAAACATGAACATTTGATTCAGAGTCCGAGTCCGT 2498
Db 2289 CATTTTAAATTCGTTACATGATCAAAACATGAACATGTAATGTGCGAGTACGGGTTCCTT 2348
QY 2499 ATGGCCGCTTTCAGTTGAAAGCCCAATCGAGAGTGGAGAAACGAATGATGCGCAC 2558

Db 2349 ATGGCCGCTTTCAGCCCAAAAGTCCAAATCGAAATGTGAGAGCCGAATCATCATCGGCC 2408
QY 2559 ACATTTGAATGGAATCTGATCTAGATTGTTCCGACAGATGGAAGAAATGAGCGCA 2618
Db 2409 ACACCTTGAATGGAATCTGATCTAGATTGTTCCGATGAGGATGGAAGAAATGAGCGCA 2468
QY 2619 TCATTCCTCATCTTCTCTTGGATATTTGATATTTGATGACACACTTGCATGAAATCT 2678
Db 2469 TCATTCCTCATCTTCTCTTGGATATTTGATATTTGATGACACACTTGAATGAGCACT 2528
QY 2679 AGCGTGTGGTGTATTTCAAGATTAAGCGCAGAAAGTCTATGCAACATGAGGAATCT 2738
Db 2529 AGGTATGAGGTATCTTTAAGATTAAGACGCAAGATGGCCACCAAGACTGAGGAATCT 2588
QY 2739 GGAATTTATGAGAGAAACCAATTAATGAGAGAACCTGCTGCTGTAAGAGAGCGCA 2798
Db 2589 AGATTTCTCGAAGAGAAACCAATTAATGAGAGAACCTGCTGCTGTAAGAGAGCGCA 2648
QY 2799 GAAAAATGAGAGACAAACGTGAAAACTAATTTGAAAACAAAACGATATATACAGA 2858
Db 2649 GAAAAATGAGAGACAAACGTGAAAAATTTGAAATGAAAACAAAATTCGTTATTAAGA 2708
QY 2859 GCGAAAAAGCTGTGAGATCTTATTTGATGATTCATATATATATATCAAGCGCA 2918
Db 2709 GCGAAAAAGATCTGTAGATCTTATTTGTAACCTCAATATGATCAATTAACAGCGCA 2768
QY 2919 TACAAACATTTGGAGATGTTATGCGGAGATTAACCTGTCATGCAATTTGAGAGGCTTA 2978
Db 2769 TACGAATATTTGCAATGATTAATGCGGAGATTAACCTGTCATGCAATTTGAGAGGCTTA 2828
QY 2979 TCTGTCAGAATTAATCTGTTATCCCGGGGTGTAATGCGGAATTTTGAAGATTAAGAG 3038
Db 2829 TCTGTCAAGATCTGTTATCCCGGGGTGTAATGCGGGTCAATGCGGCTATTTTGAAGATTAAGAG 2888
QY 3039 TCGCATTAATCACTGCAATCTCCCTATACATGCGAGAAATGTGTTAAAAATGTTGATTT 3098
Db 2889 GCGTATTTTCACTGCAATCTCCCTATATGATGCGAGAAATGTCAATTAATGTTGATTT 2948
QY 3099 TAAATATGATTTAGCAATGCTGGAATGTAAGGCAATGTTGATGT---ACAAACAGACCA 3155
Db 2949 TAAATATGCTTATCTGCTGGAACGTGAAGGCAATGATGATGAAGAAACAAACAA 3008
QY 3156 TCAACGTTCTGTCTCTGTTATCCAGATGGAAGCAGAAATGTCACAAACAGTCCGCT 3215
Db 3009 CCAACGTTCTGTCTCTGTTATCCAGATGGAAGCAGAAATGTCACAAACAGTCCGCT 3068
QY 3216 CTGTCCGGGCGTGGCTATATCTCCGTCAACGCTACAAAGAGGATATGAGAGGG 3275
Db 3069 CTGTCCGGGCGTGGCTATATCTCCGTCAACGCTACAAAGAGGATATGAGAGAG 3128
QY 3276 TTGTGTAAGATCCATGAAGATTCAGAAACATATACAGACGAATTAATTAATTAATCTGTA 3335
Db 3129 TTGTGTAAGATCCATGAAGATTCAGAAACATATACAGACGAATTAATTAATTAATCTGTA 3188
QY 3336 AGAAGAGGAAGTGTATCCAAACGATACAGAAACGTGTAAATGATTAATCTGCAACCAAG 3395
Db 3189 AGAAGAGGAAGTGTATCCAAACGATACAGAAACGTGTAAATGATTAATCTGTAATCAAG 3248
QY 3396 TACAGCATATGTAATTTCCGTAATGCTGATATGAGATGATATGAATGATATCTAC 3455
Db 3249 AGAATACGAGAGTGGCT-----ACACTTCTCGTAATCGAGATATTAACAAAGCTCTTC 3302
QY 3456 AGCATCTGTTAATTAACAAACGATATGTAAGAAAGAAACGTATACAGATTAAGAAAGAG 3515
Db 3303 CGTACAGCTGATTAATGCTCACTATATGAAGAAATGTAATACAGATTAAGAAAGAG 3362
QY 3516 TAATCAATGATATGACAGAGGATATGATTAATTCACCACTACAGCTGATATAT 3575
Db 3363 GATTCCTTGTGAATTTAAGAGGATATGAGATTAACAGCCTACAGATTTGTTATGT 3422
QY 3576 GACAAAGAAATTAATTAATCTTCCAGAAACCGATTAAGATTAAGATTAAGATTAAGAAAC 3635

Db 3423 GACAAAAAGATTGAACTCTCCAGAAACCGATTAAGTATGATGATGAGAGAAAC 3482
Qy 3636 GGAAGGGAAGTTATTTGTAGACAGCGTGAATTAATCTTATGAGAGAAATAG 3687
Db 3483 GGAAGGAACCTTTATCTGTGACAGCGTGAATTAATCTTATGAGAGAAATAG 3534

RESULT 15
US-10-739-482-25
Sequence 25. Application US/10739482
Publication No. US20040132975A1
GENERAL INFORMATION:
APPLICANT: Malvar, Thomas
APPLICANT: Mohan, Komarlingham S.
APPLICANT: Sivaesupramaniam, Sakuntala
TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad Spectrum
TITLE OF INVENTION: Delta-Endotoxins
FILE REFERENCE: MECO:220-1
CURRENT APPLICATION NUMBER: US/10/739,482
PRIOR FILING DATE: 2003-12-18
PRIOR APPLICATION NUMBER: US 09/636,746
PRIOR FILING DATE: 2000-08-11
PRIOR APPLICATION NUMBER: US 6,242,241
PRIOR FILING DATE: 1999-02-19
PRIOR APPLICATION NUMBER: US 6,110,464
PRIOR FILING DATE: 1997-09-03
PRIOR APPLICATION NUMBER: US 6,017,534
PRIOR FILING DATE: 1996-11-20
NUMBER OF SEQ ID NOS: 35
SOFTWARE: PatentIn version 3.2
SEQ ID NO 25
LENGTH: 3534
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
OTHER INFORMATION: Hybrid Delta-Endotoxin
NAME/KEY: CDS
LOCATION: (1)..(3531)
US-10-739-482-25

Query Match 38.0%; Score 1402; DB 18; Length 3534;
Best Local Similarly 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

Qy 285 TCAGTGGGAATTTCTCTAGAACATGCGAACAACTTAATCAACAATTAACAGAAA 344
Db 213 TCATGGGAGCGCATTTCTGTGACAAATTTGACAGTTAATTAACCAAGAAATGAGAAATT 272
Qy 345 TGGTAGAATACGCACTTCTGCTGATTAACAAGTTTGAAGATTCTTTAGAGCTATCA 404
Db 273 CGGTAGAACCAAGCCATTTCTGATTTAGAAAGCACTAAGCAATCTTATCAAAATTTACGC 332
Qy 405 ACGATCCTTGAAGATTGGCTAGAAAACTGATGATGCAAGAACGAAAGTGTCTTTA 464
Db 333 AGAATCTTTTGAAGAGTGGAGAGCAATCTTACTTAATCCAGCATTAAGAAAGAGATGCG 392
Qy 465 TACCAATATATAGCTTAGAATTTTCTTAATGCGATGCGCTTTTCGCAATTAG 524
Db 393 TATTCAAATTAAGATGACATGACAGTCCCTTAACAACCGCTATTCCTTTTTCGAGTTCA 452
Qy 525 AAACCAAGAGTTCCATTAATTAATGATATGCTCAAGCTGCAAAATTTACACTATTTT 584
Db 453 AAATTAATCAAGTTCTCTTTTATCAATATATGTTCAAGCTGCAAAATTTATCATTTATAGT 512
Qy 585 ATTGAGAGATGCTCTCTTTTGGTATGAAATTTGGCTTATCATGCAAGAAATTTCAAG 644
Db 513 TTTGAGAGATGTTTCAATGTTTGAACAAAGGTGGGATTTGATGCGCCGACTATCAATAG 572
Qy 645 TTTATTAAGAGGCAAGTGAACAAAGAGATTAATTCGAGTATTTGCGTGAATGATA 704
Db 573 TCGTTATTAATGATTTAATCTAGGCTTATTTGGCACTATTAACAGATCTGTAACCTGATA 632

Qy 705 TATATACAGCTCTAATATAGCTTTGAGAGGACAAATGCGCAATGTTGGTGCCTTATATCA 764
Db 633 CATATCGGATTAAGACGCTATGAGGACCGAATTTCTAGATTTGATAGATATATATCA 692
Qy 765 ATTCCGTAGAGATCTAAGCTTATGAGGATTTAGATCTAGTGCACATTTCCAAAGCTATGA 824
Db 693 ATTTAGAGAGAAATTAACCTAATCTATTTAGATATGCTTTCTTATTTCCGAACATATGA 752
Qy 825 CACTCGCACTTAATCCAAATTAATACAGAGTCTGATTAACAAGGAAATTTATACAGCG 884
Db 753 TAGTGAAGCTATTCGAATTCGAACAGTTTCCCAATTAACAGAAATTTATACAAACC 812
Qy 885 A-ATTGAGCAACAGGGTAAATATGCAAGATGAAATTTGGTAAATTAATATGACCT 942
Db 813 AGTATTAAGAAAATTTGATGATGATTTTGAAGCTCGCTCAGGGATGAAGAAATAT 872
Qy 943 TCGTTTTCGCTATAGAGACTGGGTTATCCGAAGCCGCAATCTATCTTATTTCTAGAA 1002
Db 873 TAGAGTCCACATTTGATGATATTAATTAACATTAACATCTATACGATGCTCATAG 932
Qy 1003 CAACCTTAATTTTGAACCTTATCATCAGATGAGAGTCTACTAGGATATGACTTATCTGG 1062
Db 933 GGGTATTAATTAATGCTAGGGCATCA-----AATATAGCTTCTCCTGATAGGGTT 983
Qy 1063 CGGGGCAACAATTTCAATCTCGGCCAATGAGAGGCGATTAATATCTCAAGCATGGG 1122
Db 984 TTGGGGGCAAGATTCATCTTCCGCTATATGAGAACTATAGGAA-----ATGCA 1032
Qy 1123 TCTACCAATATCTTATTAATCTCTGATAGATTAATCATTTCTTCTGAGAGATATTTGG 1182
Db 1033 GCTCCACAAACATTAATTTGCTCACTAGAGTCAAGGCGCTGATATGAAACATTAATGCTCC 1092
Qy 1183 ACTGAATCATATGACAGAGTCTTCTATGGGAAATTTAATCTTGAACCTATTCATGCTGTC 1242
Db 1093 ACTTATATAGAAAGCCTTTAATATAGGATTAATTAATCAACATATCTATCTTGTGAC 1152
Qy 1243 CTAATCTTATTAATTTTATAGAAACCTCAAGATTAATCTTGAAGAGTACTGCTAAC 1302
Db 1153 GGGAC---AGAAATTTGCTTATGAGAACTCTCAAAATTTGCCATCGCTGATACAGAAA 1208
Qy 1303 TATATCAACCCATATGATGATCACTCGGCTTCAATTAAGAAATTCAGAAATCTG-AAATACC 1361
Db 1209 AAGCGAAGGATATGATTCCTGATGATTAATCCGCAAGAAATTAACAGTGCACCTAG 1268
Qy 1362 ACCAGAAACAACAGAACCAAAATTAATGATATGATATGATATGATATCTCAATAGG 1421
Db 1269 GCAAGATTTATGATCAATGATTAAGCATATGTTCAATGTTTCG-----TCAGGCTTAG 1322
Qy 1422 GCTCATTTCAATCTAAGGATGATATGATATGATATGATATGATATGATATGATATGAT 1481
Db 1323 TATATGATGATATGATATGATATGATATGATATGATATGATATGATATGATATGAT 1382
Qy 1482 TCGTACAAATACCAATTAATGATATGATATGATATGATATGATATGATATGATATGAT 1541
Db 1383 CCTTACAAATTAATGATATGATATGATATGATATGATATGATATGATATGATATGAT 1442
Qy 1542 CTTTAAATCAAGTCTCTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1601
Db 1443 ACTTCAATGATGATATGATATGATATGATATGATATGATATGATATGATATGATATGAT 1502
Qy 1602 AACTTAACCTTAATGATATGATATGATATGATATGATATGATATGATATGATATGAT 1661
Db 1503 ACCAACAAGTGAAGGACATTTGCTTATATGATATGATATGATATGATATGATATGAT 1562
Qy 1662 GGGTATCGGATGAGAGTTCGATATGATGATGATGATGATGATGATGATGATGATGATGAT 1721
Db 1563 AAGGATTCGTCAGAAATACGCTATGCTTATCAAAATCTAAGATTTATACGATAGGT 1682
Qy 1722 CGAGGAGATCTACTTATTTGATCAAGATTTCCCTAGTATGATGATGATGATGATGATGAT 1781
Db 1623 TGCAGGTGAACGATTTTTCGCTGATCAATTAACAAACATGATGATGATGATGATGATGAT 1682
Qy 1782 GACATCTCAATCAATTAATGATTTGCAAGATTTCTGATGATATTAATGATGATGATGATGAT 1841

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: May 24, 2005, 14:00:19 ; Search time 46 Seconds
(without alignments)
1992.805 Million cell updates/sec

Title: US-10-614-524-2
Perfect score: 6479
Sequence: 1 LTRNKRKNEITINALSIPAV.....IGETGKIVDSVLLMEER 1228

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: Issued, Patence AA:*
2: /cgn2_6/ptodaca/1/1aa/5A COMB .pep.*
3: /cgn2_6/ptodaca/1/1aa/5B COMB .pep.*
4: /cgn2_6/ptodaca/1/1aa/6A COMB .pep.*
5: /cgn2_6/ptodaca/1/1aa/6B COMB .pep.*
6: /cgn2_6/ptodaca/1/1aa/6C COMB .pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	6462	99.7	1228	4 US-09-661-322A-38	Sequence 38, Appl
2	5926.5	91.5	1227	1 US-08-448-170-8	Sequence 8, Appl1
3	5926.5	91.5	1227	3 US-08-961-803-9	Sequence 9, Appl1
4	5912.5	91.3	1227	4 US-09-661-322A-63	Sequence 63, Appl
5	5659.5	87.4	1207	1 US-07-951-715A-7	Sequence 7, Appl1
6	5659.5	87.4	1207	2 US-08-459-448A-7	Sequence 7, Appl1
7	5659.5	87.4	1207	3 US-08-459-459A-7	Sequence 7, Appl1
8	5659.5	87.4	1207	3 US-08-459-504B-7	Sequence 7, Appl1
9	5659.5	87.4	1207	3 US-08-459-444-7	Sequence 7, Appl1
10	5659.5	87.4	1207	3 US-09-053-549-8	Sequence 8, Appl1
11	5659.5	87.4	1207	3 US-09-547-422-7	Sequence 7, Appl1
12	5659.5	87.4	1207	4 US-09-988-462-7	Sequence 7, Appl1
13	5436.5	83.9	1227	3 US-09-053-549-2	Sequence 2, Appl1
14	5237.5	80.8	1229	1 US-08-100-709-4	Sequence 4, Appl1
15	5237.5	80.8	1229	1 US-08-176-865-4	Sequence 4, Appl1
16	5237.5	80.8	1229	1 US-08-474-038-4	Sequence 4, Appl1
17	5237.5	80.8	1229	2 US-08-779-046-4	Sequence 4, Appl1
18	5237.5	80.8	1229	2 US-08-881-340-4	Sequence 4, Appl1
19	5108	78.8	1186	3 US-09-178-252-23	Sequence 23, Appl
20	5108	78.8	1186	4 US-09-826-660-23	Sequence 23, Appl
21	3977.5	61.4	1174	1 US-08-040-715-3	Sequence 3, Appl1
22	3977.5	61.4	1174	1 US-08-291-368-2	Sequence 2, Appl1
23	3977.5	61.4	1174	2 US-08-962-190-2	Sequence 2, Appl1
24	3977.5	61.4	1174	5 PCT-US95-10310-2	Sequence 2, Appl1
25	3977.5	61.4	1174	6 5164180-4	Patent No. 5164180
26	3977.5	61.4	1174	6 5164180-4	Patent No. 5164180
27	3791	58.5	1176	6 US-08-434-823-2	Sequence 2, Appl1

28	3791	58.5	1176	1 US-08-457-366-2	Sequence 2, Appli
29	3579	55.2	1170	1 US-08-032-364-2	Sequence 2, Appli
30	3556	54.9	1167	1 US-08-100-709-2	Sequence 2, Appl1
31	3556	54.9	1167	1 US-08-176-865-2	Sequence 2, Appli
32	3556	54.9	1167	1 US-08-474-038-2	Sequence 2, Appli
33	3556	54.9	1167	2 US-08-779-046-2	Sequence 2, Appli
34	3556	54.9	1167	2 US-08-881-340-2	Sequence 2, Appli
35	3502.5	54.1	1189	2 US-08-980-071-59	Sequence 59, Appl
36	3502.5	54.1	1189	3 US-09-314-093-59	Sequence 59, Appl
37	3502.5	54.1	1189	3 US-09-337-635-59	Sequence 59, Appl
38	3502.5	54.1	1189	4 US-09-337-280-59	Sequence 59, Appl
39	3502.5	54.1	1189	4 US-09-972-175-59	Sequence 59, Appl
40	3502.5	54.1	1189	4 US-10-200-522-59	Sequence 59, Appl
41	3500.5	54.0	1189	2 US-08-980-071-2	Sequence 2, Appl1
42	3500.5	54.0	1189	2 US-08-757-536-2	Sequence 2, Appl1
43	3500.5	54.0	1189	3 US-09-314-093-2	Sequence 2, Appli
44	3500.5	54.0	1189	3 US-09-250-848-2	Sequence 2, Appli
45	3500.5	54.0	1189	3 US-09-251-885-2	Sequence 2, Appli

ALIGNMENTS

```
RESULT 1
US-09-661-322A-38
/ Sequence 38, Application US/09661322A
/ Patent No. 6593293
/ GENERAL INFORMATION:
/ APPLICANT: Baum, James A.
/ APPLICANT: Chu, Chin-Wei
/ APPLICANT: Donovan, William P.
/ APPLICANT: Gilmer, Amy J.
/ APPLICANT: Ruppel, Mark J.
/ TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin Compos
/ TITLE OR INVENTION: and Methods of Use
/ FILE REFERENCE: MECO201
/ CURRENT APPLICATION NUMBER: US/09/661,322A
/ CURRENT FILING DATE: 2000-09-13
/ NUMBER OF SEQ ID NOS: 63
/ SOFTWARE: PatentIn version 3.0
/ SEQ ID NO 38
/ LENGTH: 1228
/ TYPE: PRT
/ ORGANISM: Bacillus thuringiensis
US-09-661-322A-38

Query Match          99.7%; Score 6462; DB 4; Length 1228;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 1223; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 LTRNKRKNEITINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVSASTVQGI 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 1 MTSNRKNEITINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVSASTVQGI 60

QY 61 NIAGRIIGLVGPAGQIASFYSFLVGEIWMRGDQMEIFLEHYEQILNQITENANNTA 120
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 61 NIAGRIIGLVGPAGQIASFYSFLVGEIWMRGDQMEIFLEHYEQILNQITENANNTA 120

QY 121 LALOGIGDSFRAYQOQSLLENRDARTRSYLYTYIALEDFLNAMPFAIRNDEVP 180
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 121 LALOGIGDSFRAYQOQSLLENRDARTRSYLYTYIALEDFLNAMPFAIRNDEVP 180

QY 181 LLMVYAQAAMTLHLRLDASLFGSEFLTSQEIORYEROVEQTRDSDYCVENYNTGLN 240
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 181 LLMVYAQAAMTLHLRLDASLFGSEFLTSQEIORYEROVEQTRDSDYCVENYNTGLN 240

QY 241 SLRGTAASWVRYNQFRDLTLGLDLVALFPSYDRTYPTINTSAQITREVTDAIGATG 300
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 241 SLRGTAASWVRYNQFRDLTLGLDLVALFPSYDRTYPTINTSAQITREVTDAIGATG 300

QY 301 VNASNMWYNNAAPSATITAVIRSPHLDFEQLTIFSTSSRWASTRTMTYWRGHTIQ 360
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 301 VNASNMWYNNAAPSATITAVIRSPHLDFEQLTIFSTSSRWASTRTMTYWRGHTIQ 360
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QY	361	SRPIGGGANTSHGNTSNINPVRSLSPFRDVTWYSSVAGVLLMGVLYLPRIHCVPRFN	420
Db	361	SRPIGGGANTSHGNTSNINPVRSLSPFRDVTWYSSVAGVLLMGVLYLPRIHCVPRFN	420
QY	421	FRNPONTERGTANYSQPYESPGLQDKOSETLPETTERPNVYSYSHRLSHIGLSQR	480
Db	421	FRNPONTERGTANYSQPYESPGLQDKOSETLPETTERPNVYSYSHRLSHIGLSQR	480
QY	481	VHVPYSWTHSHADTNTISDSISIOIPLVKSFNINSQTSVUSGPEFTGDIIRTNVNS	540
Db	481	VHVPYSWTHSHADTNTISDSISIOIPLVKSFNINSQTSVUSGPEFTGDIIRTNVNS	540
QY	541	VLSMGLNFNTNLSLQRYRVRVYAAQOTWLRATVGGSTTFDQGFPSPTMSANESLTSQSR	600
Db	541	VLSMGLNFNTNLSLQRYRVRVYAAQOTWLRATVGGSTTFDQGFPSPTMSANESLTSQSR	600
QY	601	FAEPFVGISASGSGQYAGISISNNAGQOTFHPDKIEFIPITATFEAYDLERAQAVNALF	660
Db	601	FAEPFVGISASGSGQYAGISISNNAGQOTFHPDKIEFIPITATFEAYDLERAQAVNALF	660
QY	661	TNTNPRRLKTDVTDVHIQOVSNLVACLSPBCLDERELLEKKYAKRLSDENLLQDPN	720
Db	661	TNTNPRRLKTDVTDVHIQOVSNLVACLSPBCLDERELLEKKYAKRLSDENLLQDPN	720
QY	721	FTSINKQDPFISTNEQSNFTSIHESQEHQMSSENTIOEGNDVFEXENTVYLLPGTENECY	780
Db	721	FTSINKQDPFISTNEQSNFTSIHESQEHQMSSENTIOEGNDVFEXENTVYLLPGTNEC	780
QY	781	PTYLYOKIGSESLKAYTRYQLRGYIEDSODLEIYLIRYNAKHETLDVPGTESVWPLSVBS	840
Db	781	PTYLYOKIGSESLKAYTRYQLRGYIEDSODLEIYLIRYNAKHETLDVPGTESVWPLSVBS	840
QY	841	PIGRGGEENRCAPHHEMNPDLDCSRDGEKCAHSHHFSLDIDIGCTDLHENTGWWVFK	900
Db	841	PIGRGGEENRCAPHHEMNPDLDCSRDGEKCAHSHHFSLDIDIGCTDLHENTGWWVFK	900
QY	901	IKTOGCHARLGNLEFIEEKPILLGEALSRVGRAEKKMRDRREKLOLETKRYTAEKAVDA	960
Db	901	IKTOGCHARLGNLEFIEEKPILLGEALSRVGRAEKKMRDRREKLOLETKRYTAEKAVDA	960
QY	961	LFVDSQYNRLQADVTNIGMTHAADKLVHRIREAYLSELASYPGVNAEIPFELBGRITTAIS	1020
Db	961	LFVDSQYNRLQADVTNIGMTHAADKLVHRIREAYLSELASYPGVNAEIPFELBGRITTAIS	1020
QY	1021	LYDANVYKNGEPNNGGLACMWKGHVDVOOSHRSVLVPEWAEVSOAVRCPGSGYLL	1080
Db	1021	LYDANVYKNGEPNNGGLACMWKGHVDVOOSHRSVLVPEWAEVSOAVRCPGSGYLL	1080
QY	1081	RVTAYKEGEGECQVTHIEIENNTDELKFKNGCEEEYFVPDGTGCDNYTHAQTAVCNRSN	1140
Db	1081	RVTAYKEGEGECQVTHIEIENNTDELKFKNGCEEEYFVPDGTGCDNYTHAQTAVCNRSN	1140
QY	1141	AGEDAYEVDVTASVANYKPTYEEETTYDVRDNHCEYDRGYVNPPLPAGYMTKELEYFP	1200
Db	1141	AGEDAYEVDVTASVANYKPTYEEETTYDVRDNHCEYDRGYVNPPLPAGYMTKELEYFP	1200
QY	1201	ETDKWIEIGETEGKPIYDSVLLMEE	1228
Db	1201	ETDKWIEIGETEGKPIYDSVLLMEE	1228
RESULT 2			
US-08-448-170-8			
Sequence 8, Application US/08448170			
Patent No. 5723758			
GENERAL INFORMATION:			
APPLICANT: Payne, Jewel			
APPLICANT: Cummings, David A.			
APPLICANT: Cannon, Raymond J.C.			
APPLICANT: Narva, Kenneth E.			
APPLICANT: Stelman, Steve			
TITLE OF INVENTION: No. 5723758e1 Bacillus thuringiensis Isolate Denoted			

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: TITLE OF INVENTION: B.t. PS158C2, Active Against Lepidopteran Pests, and Genes
: TITLE OF INVENTION: B.t. PS158C2, Active Against Lepidopteran Pests, and Genes
: NUMBER OF SEQUENCES: 10
: CORRESPONDENCE ADDRESS:
: ADDRESSSEE: David R. Saliwanchik
: STREET: 2421 N.W. 41st Street, Suite A-1
: CITY: Gainesville
: STATE: Florida
: COUNTRY: USA
: ZIP: 32606
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Patentin Release #1.0, Version #1.25
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/448,170
: FILING DATE:
: CLASSIFICATION: 424
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 08/069,902
: FILING DATE: 01-JUNE-1993
: CLASSIFICATION: 424
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/759,247
: FILING DATE: 13-SEPT-1991
: CLASSIFICATION: 424
: ATTORNEY/AGENT INFORMATION:
: NAME: Saliwanchik, David R.
: REGISTRATION NUMBER: 31,794
: REFERENCE/DOCKET NUMBER: W/S 102D.C1
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: (904) 375-8100
: TELEFAX: (904) 372-5800
: INFORMATION FOR SEQ ID NO: 8:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 1227 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
: MOLECULE TYPE: peptide
: US-08-448-170-8

Query Match 91.5%; Score 5926.5; DB 1; Length 1227;
Best Local Similarity 91.8%; Pred. No. 0;
Matches 1129; Conservative 36; Mismatches 60; Indels 5; Gaps 3;

QY 1 LTSRKNEKEIILNLSIPAVNSHSTOMDLSPDARIEDSLCTAEGNNINPLVASTVQTGI 60
DB 1 LTSRKNEKEIILNLSIPAVNSHSTOMDLSPDARIEDSLCTAEGNNINPLVASTVQTGI 60
QY 61 NIAGRIIGVLGVFPAGQIASFYSPFLVGEIWPGRDQWEI FLEHVBLINQQTENARNTA 120
DB 61 NIAGRIIGVLGVFPAGQIASFYSPFLVGEIWPGRDQWEI FLEHVBLINQQTENARNTA 120
QY 121 LARIQIGDSFRAYQOSLEDWLENRDARTSVLTQYITALELDFLAMPFAIRNQEV 180
DB 121 LARIQIGDSFRAYQOSLEDWLENRDARTSVLTQYITALELDFLAMPFAIRNQEV 180
QY 181 LLAMYAQAANLHLLLRDASLFGSEFGLTSGEIQRYVEROVQGTDSYCYEWNTGN 240
DB 181 LLAMYAQAANLHLLLRDASLFGSEFGLTSGEIQRYVEROVQGTDSYCYEWNTGN 240
QY 241 SLRGNTAASVRYNQFRDRLTLGVLDVALFPSSYDTRTYPINTSAQLTEVYTDAGATG 300
DB 241 SLRGNTAASVRYNQFRDRLTLGVLDVALFPSSYDTRTYPINTSAQLTEVYTDAGATG 300
QY 301 V-NMASNMWYNNNAPEFSALIEAVIRSPHLLDFLEQLTIFSTSSRWSATRHMTYRGHT 358
DB 301 V-NMASNMWYNNNAPEFSALIEAVIRSPHLLDFLEQLTIFSTSSRWSATRHMTYRGHT 358
QY 359 IQSPRIIGGLLITSTGISTNTSINPRLSPFSPRDVYWTSSYAGVLLMGVILPEIHGVPYR 418
DB 359 IQSPRIIGGLLITSTGISTNTSINPRLSPFSPRDVYWTSSYAGVLLMGVILPEIHGVPYR 418

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Db 361 LEARTRIGSLSTHGTNTSINPVLTQFTSRDVRTESPAGINI--LITTPNUGVWAR 418
Qy 419 FNRPNPONTERTANTSQPYESPGLQKDETELPEPETERPNYESYSHLSIGLISQ 478
Db 419 FNRPNPNTSL-RGSLVLTIGYGTQLPDETELPEPETERPNYESYSHLSIRLISG 477
Qy 479 SRVHVPPYSWTHRSADPTNTISSDITQIPLYKSPFNNSGTSVSGPGFGDITRNVN 538
Db 478 NTRAPVSWTHRSADPTNTISSDITQIPLYKSPFNNSGTSVSGPGFGDITRNVN 537
Qy 539 GSVLSMGLNFNTSLQRYRVVRVYASQTVLRTVYGSGTTPDQPGPSTMSANESLTSOS 598
Db 538 GSVLSMGLNFNTSLQRYRVVRVYASQTVLRTVYGSGTTPDQPGPSTMSANESLTSOS 597
Qy 599 FRPAEPVPGISAGSGQTAGISISNNAGROTFFHDKIFIPITATFEAYDLERAQAVNA 658
Db 598 FRPAEPVPGISAGSGQTAGISISNNAGROTFFHDKIFIPITATFEAYDLERAQAVNA 657
Qy 659 LFTNTPRRLKTDVTDHIDQVSNLVACLSDEFCLDEKRELLKVKAKLSDERNLLOD 718
Db 658 LFTNTPRRLKTDVTDHIDQVSNLVACLSDEFCLDEKRELLKVKAKLSDERNLLOD 717
Qy 719 PNTSLINKODPSTINEQSNFTSIHEQSEHGMWSENIITIOEGNDVPEKNYVTLPGTFNE 778
Db 718 PNTSLINKODPSTINEQSNFTSIHEQSEHGMWSENIITIOEGNDVPEKNYVTLPGTFNE 777
Qy 779 CYPTLYYOKIGSELKAYTRYOLRGYLEDSDQLEIYLIRYNAKHETLDVGTESVWPLSY 838
Db 778 CYPTLYYOKIGSELKAYTRYOLRGYLEDSDQLEIYLIRYNAKHETLDVGTESVWPLSY 837
Qy 839 ESPIGRCGEENRCAPHEENPDLDCSCRODEKCAHSHHSLSLDIDICTLHENTLGVWV 898
Db 838 ESPIGRCGEENRCAPHEENPDLDCSCRODEKCAHSHHSLSLDIDIVGCDLHENTLGVWV 897
Qy 899 FKKTQEGHARLGNLEFTEKPLLGELSHVKAEEKKARKRELDQLETKRYVTEAKEAV 958
Db 898 FKKTQEGHARLGNLEFTEKPLLGELSHVKAEEKKARKRELDQLETKRYVTEAKEAV 957
Qy 959 DALFVDSQVNRLOADTNIGMIHADKLVHRIREAVYSELVIRGVNAIEFELEGRIITTA 1018
Db 958 DALFVDSQVNRLOADTNIGMIHADKLVHRIREAVYSELVIRGVNAIEFELEGRIITTA 1017
Qy 1019 ISLYDARVYKNGDPFNNGLACNVKGVADVQOSHRSVLVPEWEAEVSAQVAVCPGRGY 1078
Db 1018 ISLYDARVYKNGDPFNNGLACNVKGVADVQOSHRSVLVPEWEAEVSAQVAVCPGRGY 1077
Qy 1079 ILKVTAYKESYSGCYTHIEIENNTDELKFKNCEBEVYPTDGTCDYTAHOGTAVCNS 1138
Db 1078 ILKVTAYKESYSGCYTHIEIENNTDELKFKNCEBEVYPTDGTCDYTAHOGTAVCNS 1137
Qy 1139 RNAGYDAVEVDPTTASVNYKPYEEETVTDVRDNHCEYRGVYVNPPLPAGYMTKELEY 1198
Db 1138 RNAGYDAVEVDPTTASVNYKPYEEETVTDVRDNHCEYRGVYVNPPLPAGYMTKELEY 1197
Qy 1199 PFETDKWIEIGTEGKFIVDSVELLMEE 1228
Db 1198 PFETDKWIEIGTEGKFIVDSVELLMEE 1227

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RESULT 3
US-08-961-803-9
Sequence 9, Application US/08961803
Patent No. 6150589
GENERAL INFORMATION:
APPLICANT: Payne, Jewel
APPLICANT: Cummings, David A.
APPLICANT: Cannon, Raymond J.C.
APPLICANT: Narva, Kenneth E.
APPLICANT: Steilman, Steve
TITLE OF INVENTION: No. 6150589e1 Bacillus thuringiensis isolate Denoted
TITLE OF INVENTION: B.t. P615862, Active Against Lepidopteran Pests, and Genes
TITLE OF INVENTION: Encoding Lepidopteran-Active Toxins
NUMBER OF SEQUENCES: 10

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CORRESPONDENCE ADDRESS:
ADDRESSER: Jay M. Sanders
STREET: 2421 N.W. 41st Street, Suite A-1
CITY: Gainesville
STATE: Florida
COUNTRY: USA
ZIP: 32606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,803
FILING DATE: 31-OCT-1997
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/069,902
FILING DATE: 01-JUNE-1993
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/759,247
FILING DATE: 13-SEPT-1991
CLASSIFICATION: 800
APPLICATION DATA:
APPLICATION NUMBER: US 08/448,170
FILING DATE: 23-MAY-1995
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sanders, Jay M.
REGISTRATION NUMBER: 39,355
REFERENCE/DOCKET NUMBER: M/S 102DCD1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (352) 375-8100
TELEFAX: (352) 372-5800
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 1227 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-961-803-9
Query Match 91.5%; Score 5926.5; DB 3; Length 1227;
Best Local Similarity 91.8%; Pred. No. 0;
Matches 1129; Conservative 36; Mismatches 60; Indels 5; Gaps 3;

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Qy 1 LTSNRKNEIINALSIPAVSNHSTOWDLSPPARIEDSLCIAEGNNINPLVASTVQGI 60
Db 1 LTSNRKNEIINALSIPAVSNHSTOWDLSPPARIEDSLCIAEGNNINPLVASTVQGI 60
Qy 61 NINGRILGVGVPPAGQIASFYSFLVGEMLPGRDQWEITLHVYEQILINQITENARNTA 120
Db 61 NINGRILGVGVPPAGQIASFYSFLVGEMLPGRDQWEITLHVYEQILINQITENARNTA 120
Qy 121 LARLOGSGSFRAVQOGLSDWMLNRPDARTRSVLYTOYALDELFLNAMPFLAIRNOEVP 180
Db 121 LARLOGSGSFRAVQOGLSDWMLNRPDARTRSVLYTOYALDELFLNAMPFLAIRNOEVP 180
Qy 181 LLMVYAQAANTLHLLLRDASLFGSEFGTISOETQRYREROVEQTRDYSDEVENYNTGLN 240
Db 181 LLMVYAQAANTLHLLLRDASLFGSEFGTISOETQRYREROVEQTRDYSDEVENYNTGLN 240
Qy 241 SLRGTAASWRYNORRRDLTGLVDLVALPSYDTRTYVINTSAQITREVTYDAGATG 300
Db 241 NLRGTAASWRYNORRRDLTGLVDLVALPSYDTRTYVINTSAQITREVTYDAGATG 300
Qy 301 V--NMASQWYNNNNAFSFAIETAVIRSPHLDFLEOLITFSTSSRSATRHMTYRGRGT 358
Db 301 ABGCFASWNNNNAFSFAIETAVIRSPHLDFLEOLITFSTSSRSATRHMTYRGRGT 358
Qy 359 IGRPIGGGLNTSTHGTNTSINPVLSFESRDVYTESYAGVLWGILYLEPIHGVPTVR 418

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Db      361 LBSRTIRGSLSTSTHGNNTSINPVLQFTSRDVYRTESPAGINI--LLTPVNGVPMAR 418
Qy      419 FNRNPNQNTFERGTANYSQPYESPGLQKQSETELPETTERPNYSYSRLSHIGLSQ 478
Db      419 FNRNPNLSL-RGSLTYTGTGVGTOLPDESETELPETTERPNYSYSRLSHIRLISG 477
Qy      479 SRVHVSVWTHRSADRTNTISSDSITQIPLVKSFMINSSTSVSGPGFTGDIIRTNVN 538
Db      478 NTLRAVPVSWTHRSADRTNTISSDSITQIPLVKSFMINSSTSVSGPGFTGDIIRTNVN 537
Qy      539 GSVLISGLNPNNTSLQRYRVRYAASQTMVLAATVGGSTTPQGPSTMSANESLTSQS 598
Db      538 GSVLISGLNPNNTSLQRYRVRYAASQTMVLAATVGGSTTPQGPSTMSANESLTSQS 597
Qy      599 FRPAEPVPGISASGSGTAGISISNNAGROTFFHDKIEPIITATFEAEYDLERAQAEVNA 658
Db      598 FRPAEPVPGISASGSGTAGISISNNAGROTFFHDKIEPIITATFEAEYDLERAQAEVNA 657
Qy      659 LFTNTPRRLKTDVTDYHIDOVSNLVACLSDEFCLDEKRELBKVKYAKRLSDERNLQD 718
Db      658 LFTNTPRRLKTDVTDYHIDOVSNLVACLSDEFCLDEKRELBKVKYAKRLSDERNLQD 717
Qy      719 PNFTSINKOPDPISTNEQSNFTSIHQSEHGMMGSENITTOEGNDVPKENVYVTLPGTFNE 778
Db      718 PNFTSINKOPDPISTNEQSNFTSIHQSEHGMMGSENITTOEGNDVPKENVYVTLPGTFNE 777
Qy      779 CYPITYLYOKIGSEBLKAYTRYOLRGYIEDSODLEIYLIRYNAHRETLDVGTESWPLSV 838
Db      778 CYPITYLYOKIGSEBLKAYTRYOLRGYIEDSODLEIYLIRYNAHRETLDVGTESWPLSV 837
Qy      839 ESPIGRCGEENRCAPHEENPDLDCSCRODEKCAHSHHSFLDIDGCTDLHENLGVWV 898
Db      838 ESPIGRCGEENRCAPHEENPDLDCSCRODEKCAHSHHSFLDIDGCTDLHENLGVWV 897
Qy      899 FKKTQEGHARLGNLEFIEBKPLLGELSLSVKAEKKMRKREKLOETGRVYVTEAKEAV 958
Db      898 FKKTQEGHARLGNLEFIEBKPLLGELSLSVKAEKKMRKREKLOETGRVYVTEAKEAV 957
Qy      959 DALFVDSQVRLQADNTIGMIAHADKLMHRIREAYISELSVPGVNAIEFEELEGRIITA 1018
Db      958 DALFVDSQVRLQADNTIGMIAHADKLMHRIREAYISELSVPGVNAIEFEELEGRIITA 1017
Qy      1019 ISLYDARNVKNQDPPNGLACMNVKGVHDVQOQSHHSVLVPIEMBAEVSQAVVCPGRGY 1078
Db      1018 ISLYDARNVKNQDPPNGLACMNVKGVHDVQOQSHHSVLVPIEMBAEVSQAVVCPGRGY 1077
Qy      1079 ILAVTAYKEGYGSCCTIHEIENNTDELKFKNCEEBEYVPTDGTCDNYTAHOGTAVCNS 1138
Db      1078 ILAVTAYKEGYGSCCTIHEIENNTDELKFKNCEEBEYVPTDGTCDNYTAHOGTAVCNS 1137
Qy      1139 RNAGYEDAYEVDTTASVNYKPTYEBEETVTDVRDNHCEYRGYVNPPLPAGYMTKELEY 1198
Db      1138 RNAGYEDAYEVDTTASVNYKPTYEBEETVTDVRDNHCEYRGYVNPPLPAGYMTKELEY 1197
Qy      1199 FPETDKWIEIGETGEKFIYDSVELLMEZ 1228
Db      1198 FPETDKWIEIGETGEKFIYDSVELLMEZ 1227

```

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; CURRENT APPLICATION NUMBER: US/09/661,322A
; CURRENT FILING DATE: 2000-09-13
; NUMBER OF SEQ ID NOS: 63
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 63
; LENGTH: 1227
; TYPE: PRT
; ORGANISM: Bacillus thuringiensis
US-09-661-322A-63

Query Match      91.3%; Score 5912.5; DB 4; Length 1227;
Best Local Similarity 91.6%; Pred. No. 0;
Matches 1127; Conservative 36; Mismatches 62; Indels 5; Gaps 3;

Qy      1 LTSNRKNEEIIINALSIPAVSNHSTOMDSPPARIBDSLCIAGNNINPLVASTVQTGI 60
Db      1 LTSNRKNEEIIINALSIPAVSNHSAQMNISTARIBDSLCIAGNNIDPVSASTVQTGI 60
Qy      61 NIAGRILGVLPFACQISFFSVLGEIAMPGRGDWEIFLEHVQOLINQITENARNTA 120
Db      61 NIAGRILGVLPFACQISFFSVLGEIAMPGRGDWEIFLEHVHILRQOVTEHNRDTA 120
Qy      121 LARLQGLGSPRAYOQSLDMDLENRDARTSVLYTQYIALDELPLNAMPPLAIRNOEVP 180
Db      121 LARLQGLGNSFRAYOQSLDMDLENRDARTSVLYTQYIALDELPLNAMPPLAIRNOEVP 180
Qy      181 LAMVYAQAANLHLLLRDASLFGSEBGLTSOBIQRYERQVEQTRDYSYCVEMVNTGLN 240
Db      181 LAMVYAQAANLHLLLRDASLFGSEBGLTSOBIQRYERQVEKTRSDYCAMVNTGLN 240
Qy      241 SLRGTAASWVRYNQRRDLTGVDLVALPSPYDRTYPIINTSAQLTREVTDAIGATG 300
Db      241 SLRGTAASWVRYNQRRDLTGVDLVALPSPYDRTYVPMNTSAQLTREIYTDPIGRIN 300
Qy      301 V--NMASMMVNNNNAFSFAIEFAVIRSPHLDFLEQLTFFSTSRMSATRHMTYRGHT 358
Db      301 ABSGFASTMPFNNAFSFSAIEFAVIRPHLDLFPQLTFFSVLSKMSNTQVNVYVGH 360
Qy      359 IQRPIGGIANTSTHGNNTSINPVLQFTSRDVYRTESYAGVLLGVIPLPHGVPTVR 418
Db      361 LBSRTIRGSLSTSTHGNNTSINPVLQFTSRDVYRTESPAGINI--LLTPVNGVPMAR 418
Qy      419 FNRNPNQNTFERGTANYSQPYESPGLQKQSETELPETTERPNYSYSRLSHIGLSQ 478
Db      419 FNRNPNLSL-RGSLTYTGTGVGTOLPDESETELPETTERPNYSYSRLSHIRLISG 477
Qy      479 SRVHVSVWTHRSADRTNTISSDSITQIPLVKSFMINSSTSVSGPGFTGDIIRTNVN 538
Db      478 NTLRAVPVSWTHRSADRTNTISSDSITQIPLVKSFMINSSTSVSGPGFTGDIIRTNVN 537
Qy      539 GSVLISGLNPNNTSLQRYRVRYAASQTMVLAATVGGSTTPQGPSTMSANESLTSQS 598
Db      538 GSVLISGLNPNNTSLQRYRVRYAASQTMVLAATVGGSTTPQGPSTMSANESLTSQS 597
Qy      599 FRPAEPVPGISASGSGTAGISISNNAGROTFFHDKIEPIITATFEAEYDLERAQAEVNA 658
Db      598 FRPAEPVPGISASGSGTAGISISNNAGROTFFHDKIEPIITATFEAEYDLERAQAEVNA 657
Qy      659 LFTNTPRRLKTDVTDYHIDOVSNLVACLSDEFCLDEKRELBKVKYAKRLSDERNLQD 718
Db      658 LFTNTPRRLKTDVTDYHIDOVSNLVACLSDEFCLDEKRELBKVKYAKRLSDERNLQD 717
Qy      719 PNFTSINKOPDPISTNEQSNFTSIHQSEHGMMGSENITTOEGNDVPKENVYVTLPGTFNE 778
Db      718 PNFTSINKOPDPISTNEQSNFTSIHQSEHGMMGSENITTOEGNDVPKENVYVTLPGTFNE 777
Qy      779 CYPITYLYOKIGSEBLKAYTRYOLRGYIEDSODLEIYLIRYNAHRETLDVGTESWPLSV 838
Db      778 CYPITYLYOKIGSEBLKAYTRYOLRGYIEDSODLEIYLIRYNAHRETLDVGTESWPLSV 837
Qy      839 ESPIGRCGEENRCAPHEENPDLDCSCRODEKCAHSHHSFLDIDGCTDLHENLGVWV 898
Db      838 ESPIGRCGEENRCAPHEENPDLDCSCRODEKCAHSHHSFLDIDGCTDLHENLGVWV 897

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QY 899 FKKTQGHARLGNLEETIEEKPILGELSRVKAERKRDREKLOETKRVYTEAEAV 958
 DB 898 FKKTQGHARLGNLEETIEEKPILGELSRVKAERKRDREKLOETKRVYTEAEAV 957
 QY 959 DALFVDSQVNRLOADNTNIGMHADKLVHRIREAVLSLSTIPGVNAIEPEELGRITTA 1018
 DB 958 DALFVDSQVNRLOADNTNIGMHADKLVHRIREAVLSLSTIPGVNAIEPEELGRITTA 1017
 QY 1019 ISLYDANVNVNGDFNNGLACMNVKGVHDVQOSHRSRLVPEWEAEVSQAVRCPGRGY 1078
 DB 1018 ISLYDANVNVNGDFNNGLACMNVKGVHDVQOSHRSRLVPEWEAEVSQAVRCPGRGY 1077
 QY 1079 ILKRVAYKEGEGSCVTIHEIENNTDELKFNKCEEEVPTDGTCDNYTAHQGTAVCNS 1138
 DB 1078 ILKRVAYKEGEGSCVTIHEIENNTDELKFNKCEEEVPTDGTCDNYTAHQGTAVCNS 1137
 QY 1139 RNAGYEAVYEVDTASVNVKPTVEEETVTDVRBNHCEYRGVNVPELPAGVWTKLEY 1198
 DB 1138 RNAGYEAVYEVDTASVNVKPTVEEETVTDVRBNHCEYRGVNVPELPAGVWTKLEY 1197
 QY 1199 FPEYDKWIEIGETEGKFIYDSVELLMEB 1228
 DB 1198 FPEYDKWIEIGETEGKFIYDSVELLMEB 1227

RESULT 5

US-07-951-715A-7

Sequence 7, Application US/07951715A

Patent No. 5625136

GENERAL INFORMATION:

APPLICANT: Kozziel, Michael G.

APPLICANT: Deesal, Najini M.

APPLICANT: Lewis, Kelly S.

APPLICANT: Kramer, Vance C.

APPLICANT: Warren, Gregory W.

APPLICANT: Evola, Stephen V.

APPLICANT: Crossland, Lyle D.

APPLICANT: Wright, Martha S.

APPLICANT: Merilin, Ellis J.

APPLICANT: Launie, Karen L.

APPLICANT: Rochelstein, Steven J.

APPLICANT: Bowman, Cindy G.

APPLICANT: Dawson, John L.

APPLICANT: Dunder, Erik M.

APPLICANT: Pace, Gary M.

APPLICANT: Suttie, Janet L.

TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED

TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE

NUMBER OF SEQUENCES: 94

CORRESPONDENCE ADDRESS:

ADDRESSEE: CIBA-GEIGY Corporation

STREET: 7 Skyline Drive

CITY: Hawthorne

STATE: New York

COUNTRY: USA

ZIP: 10532

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30B

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/951,715A

FILING DATE: 25-SEP-1992

CLASSIFICATION: 800

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/772,027

FILING DATE: 04-OCT-1991

ATTORNEY/AGENT INFORMATION:

NAME: Spruiell, W. Murray

REGISTRATION NUMBER: 32,943

REFERENCE/DOCKET NUMBER: S-18805/A/CGC 1577/CIP

QY 866 RDEKCAHSHHSLDIDIGCTDLHENTLGVVFKITQGHARLGNLEETIEEKPILGEL 925
 DB 866 RDEKCAHSHHSLDIDIGCTDLHENTLGVVFKITQGHARLGNLEETIEEKPILGEL 925

TELECOMMUNICATION INFORMATION:
 TELEPHONE: (919) 541-8615
 TELEFAX: (919) 541-8689
 INFORMATION FOR SEQ ID NO: 7:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1207 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-07-951-715A-7

Query Match 87.4%; Score 5659.5; DB 1; Length 1207;
 Best Local Similarity 89.4%; Pred. No. 0;
 Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MDLSPDARIDSLDCLIAENNNINPLVVSATVQTGINIGRIIGLVGPAGIASFYFLV 86
 DB 1 MDLSPDARIDSLDCLIAENNNINPLVVSATVQTGINIGRIIGLVGPAGIASFYFLV 60
 QY 87 GELMPGRDQWEIPLFHEVBOILNQOITENANRNTALARLOGLGDSFRAVYQOSLDEWLENRD 146
 DB 61 GELMPGRDQWEIPLFHEVBOILNQOITENANRNTALARLOGLGDSFRAVYQOSLDEWLENRD 120
 QY 147 DARTSRVLYTOYIALLEDFLANMPLFAIRNOEVPILMVYQAANLHLLLRDASLFGSEF 206
 DB 121 DARTSRVLYTOYIALLEDFLANMPLFAIRNOEVPILMVYQAANLHLLLRDASLFGSEF 180
 QY 207 GLTSOEIORYEBQVEQTRDYSQVCEWNTGNSLGTNAASVVRNORPDLTLGLVD 266
 DB 181 GLTSOEIORYEBQVEQTRDYSQVCEWNTGNSLGTNAASVVRNORPDLTLGLVD 240
 QY 267 LVALLPESYDRTYPTINTSAQLTREVTDAIGATGVNNAAMVNNAPSFSAIETAVYRS 326
 DB 241 LVALLPESYDRTYPTINTSAQLTREVTDAIGATGVNNAAMVNNAPSFSAIETAVYRS 300
 QY 327 PHLLDFLEQLTIFSTSRMSATRMVYRGHTTQSRPIGGALNTSTGNTSINPYRLS 386
 DB 301 PHLLDFLEQLTIFSTSRMSATRMVYRGHTTQSRPIGGALNTSTGNTSINPYRLS 360
 QY 387 FFSRDVYWTESYAGVLLMGVLYLRPHGVPRVPRFRPDQMTFERGTANYQPYSPGLQL 446
 DB 361 FFSRDVYWTESYAGVLLMGVLYLRPHGVPRVPRFRPDQMTFERGTANYQPYSPGLQL 420
 QY 447 KOSETTELPETTRPNYESYSHLSHIGLISQSRVHVYVSWTFRSADRNTTSSDSITQ 506
 DB 421 KOSETTELPETTRPNYESYSHLSHIGLISQSRVHVYVSWTFRSADRNTTSSDSITQ 480
 QY 507 IPLVKSFNLSGTVSVSGPFTGGDILIRTVNGSVLSMGLFNNTSLQRYRVRYVAASQ 566
 DB 481 IPLVKSFNLSGTVSVSGPFTGGDILIRTVNGSVLSMGLFNNTSLQRYRVRYVAASQ 540
 QY 567 TMTLRYTVGSGTTPDQFPSTMSANESLTQSRRFAFPFGISASGQ-7AGISINNAG 625
 DB 541 TMTLRYTVGSGTTPDQFPSTMSANESLTQSRRFAFPFGISASGQ-7AGISINNAG 600
 QY 626 RQTFHPDKIEFIPITATFBAEYDLERAQAVNALFTNTNPRRLTVDVTHIDVSNLVA 685
 DB 601 RQTFHPDKIEFIPITATFBAEYDLERAQAVNALFTNTNPRRLTVDVTHIDVSNLVA 660
 QY 686 CLSDEFCLDEKRELLEKVKYAKRLSDERNLLODPNFTSINKOPFISTNQSNTS1HEQ 745
 DB 661 CLSDEFCLDEKRELLEKVKYAKRLSDERNLLODPNFTSINKOPFISTNQSNTS1HEQ 720
 QY 746 SEHGWSSENIITQOENGDVKEKENVYTLPGTFNCEYPTLYYOKIGESLKYTYQLAGYI 805
 DB 721 SEHGWSSENIITQOENGDVKEKENVYTLPGTFNCEYPTLYYOKIGESLKYTYQLAGYI 780
 QY 806 EDSQDLEIYIRRNAKHETLDVGTGSVWPLVSFPGRCGEPRRCAPHEFEMNPDLDSC 865
 DB 781 EDSQDLEIYIRRNAKHETLDVGTGSVWPLVSFPGRCGEPRRCAPHEFEMNPDLDSC 840
 QY 866 RDEKCAHSHHSLDIDIGCTDLHENTLGVVFKITQGHARLGNLEETIEEKPILGEL 925

DB 841 RDEKCAHSHSHSLDIDVCGTDLHNTLGVWVFKITQDGHARLGNLEIEKPLIGEA 900
QY 926 LSRVKAEEKMRDKREKLOLETRVYTAKEAVDALFVDSQYRLOADNTIGMHAADKI 985
DB 901 LSRVKAEEKMRDKREKLOLETRVYTAKEAVDALFVDSQYRLOADNTIGMHAADKI 960
QY 986 VHRIRAVYSELVIGVNAEIEELEGRIITLISLYDANVYKNDPNNGLACNVKKG 1045
DB 961 VHRIRAVYSELVIGVNAEIEELEGRIITLISLYDANVYKNDPNNGLACNVKKG 1020
QY 1046 VDVQSHHSVLYIPEWEAEVSOAVRVCPRGYILRLVYAKESYGEGCVTIHEIENNTDE 1105
DB 1021 VDVQSHHSVLYIPEWEAEVSOAVRVCPRGYILRLVYAKESYGEGCVTIHEIENNTDE 1080
QY 1106 LKFKNCEEEBVPYPTDGTGCTNDYTAHQGTA---VCNSRNAGYDAYEVDTTASVNYKPTV 1161
DB 1081 LKFKNCEEEBVPYPTDGTGCTNDYTAHQGTA---VCNSRNAGYDAYEVDTTASVNYKPTV 1140
QY 1162 EERTYDVRDNHCEYDRGVNVPPLPAGIMTELEFPETDKVMTIEIGTEGKFLVDSV 1221
DB 1141 EERTYDVRDNHCEYDRGVNVPPLPAGIMTELEFPETDKVMTIEIGTEGKFLVDSV 1200
QY 1222 ELLLMEE 1228
DB 1201 ELLLMEE 1207

RESULT 6

US-08-459-448A-7
Sequence 7, Application US/08459448A
Patent No. 5859336

GENERAL INFORMATION:

APPLICANT: Koziele, Michael G.
APPLICANT: Desai, Nalini M.
APPLICANT: Lewis, Kelly S.
APPLICANT: Kramer, Vance C.
APPLICANT: Warren, Gregory W.
APPLICANT: Evola, Stephen V.
APPLICANT: Crossland, Lyle D.
APPLICANT: Wright, Martha S.
APPLICANT: Merilin, Ellis J.
APPLICANT: Launis, Karen L.
APPLICANT: Rothstein, Steven J.
APPLICANT: Bowman, Cindy G.
APPLICANT: Dawson, John L.
APPLICANT: Dunder, Erik M.
APPLICANT: Pace, Gary M.
APPLICANT: Suttie, Janet L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 5859336artis Corporation
STREET: Patent & Trademark Dept., 520 White Plains
STREET: Rd., POB 2005
CITY: Tarrytown
STATE: New York
COUNTRY: USA
ZIP: 10591-9005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,448A
FILING DATE: 02-JUN-1995
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027

FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pace, Gary M.
REGISTRATION NUMBER: 40403
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIVA
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8582
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-459-448A-7
Query Match 87.4%; Score 5659.5; DB 2; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;
QY 27 MDLSPARIEDSICIAEGNNINPLVSAFTVQGINIAGRIILGVLPFAQQLASFTSFLV 86
DB 1 MDLSPARIEDSICIAEGNNIDPFVSAFTVQGINIAGRIILGVLPFAQQLASFTSFLV 60
QY 87 GELMPRGDQWEFLFHEVROLINQOITENARNATLALGLDGFRAQOQLSDMTENRD 146
DB 61 GELMPRGDQWEFLFHEVROLINQOITENARNATLALGLDGFRAQOQLSDMTENRD 120
QY 147 DARTSVLYTOYIALELDFLNMPLFAIRNOEVLIMVYAOANHLILLRDSALFSGSEF 206
DB 121 DARTSVLYTOYIALELDFLNMPLFAIRNOEVLIMVYAOANHLILLRDSALFSGSEF 180
QY 207 GLTSQEIORYRBOEQTRDYSYCYEWNTGINSIRGTNAASWVRYNQFRRLTIGVLD 266
DB 181 GLTSQEIORYRBOEQTRDYSYCYEWNTGINSIRGTNAASWVRYNQFRRLTIGVLD 240
QY 267 LVALPSPYDTRTPYNTSQAOLREVTDAIGATGVMAASNNVNNNAAPSALETVIRS 326
DB 241 LVALPSPYDTRTPYNTSQAOLREVTDAIGATGVMAASNNVNNNAAPSALETVIRS 300
QY 327 PHLLDFLEQLITFSTSRMSATRHMTYWRGHTIQSRPIGGGLNTSYHGSTNTSINPVRLS 386
DB 301 PHLLDFLEQLITFSTSRMSATRHMTYWRGHTIQSRPIGGGLNTSYHGSTNTSINPVRLS 360
QY 387 PFSRDVYMTESYAGVILMGIIYLEPIHGVPTVRFPNPNQTFERGTAANTSOPIESRQLQ 446
DB 361 PFSRDVYMTESYAGVILMGIIYLEPIHGVPTVRFPNPNQTFERGTAANTSOPIESRQLQ 420
QY 447 KQSETELPETTERPYVESYSHLSHIGLISOSRVVVPYSWTHRSADRNTTSSDSITQ 506
DB 421 KQSETELPETTERPYVESYSHLSHIGLISOSRVVVPYSWTHRSADRNTTSSDSITQ 480
QY 507 IPLVKSFNINSGSVVSGPFTGGDIIRTNVNSVSMGLFNNTSLQRYRVVRVYASQ 566
DB 481 IPLVKSFNINSGSVVSGPFTGGDIIRTNVNSVSMGLFNNTSLQRYRVVRVYASQ 540
QY 567 TMLRVTVGSGTTFDQGFPSYMSANESLTSQSFRAEPFVYISASGQ-TAGISISNNAQ 625
DB 541 TMLRVTVGSGTTFDQGFPSYMSANESLTSQSFRAEPFVYISASGQ-TAGISISNNAQ 600
QY 626 RQTFHFDKLEFIPITATFEAYDLERAQAVNALFTNTPRRKTKTVDVTHIDQVSLVA 685
DB 601 RQTFHFDKLEFIPITATFEAYDLERAQAVNALFTNTPRRKTKTVDVTHIDQVSLVA 660
QY 686 CLSDFCLDEKRELEKRYAKRLSDERMLQDPNFTSINKQDPFTSYNEQSFTSIHQ 745
DB 661 CLSDFCLDEKRELEKRYAKRLSDERMLQDPNFTSINKQDPFTSYNEQSFTSIHQ 720
QY 746 SEHGMWSENITIQGNDVFKENYVTLPGTFNECYPTLYLYOKIGSELKAYTRYQLRGYI 805
DB 721 SEHGMWSENITIQGNDVFKENYVTLPGTFNECYPTLYLYOKIGSELKAYTRYQLRGYI 780
QY 806 EDSQDLEIYLIRNAGHFLDVGCTESWPLSVESFIGRGGEPRNRCAPHENMPDLDSC 865

Db 781 EDSDDEIYIIRNAKETTLDVPTESLWPLSVSPICRCEPNKCAPIHEWNPDLJOSC 840
Qy 866 RDEKCAHSHHSLDIDIGCTDLEHNGVWVFKITQEGHARLGNLEFIEKPLLGEA 925
Db 841 RDEKCAHSHHSLDIDIGCTDLEHNGVWVFKITQEGHARLGNLEFIEKPLLGEA 900
Qy 926 LSRVKAERKWRDREKLOJETKRVYTAKEAVDALVDSQYNFLQADNTGIMHAADKL 985
Db 901 LSRVKAERKWRDREKLOJETKRVYTAKEAVDALVDSQYNFLQADNTGIMHAADKL 960
Qy 986 VHRIRAYLSLSVYPCVNAIEPELEGRITTAISLVANVYNGNPNGLACWYKGH 1045
Db 961 VHRIRAYLSLSVYPCVNAIEPELEGRITTAISLVANVYNGNPNGLACWYKGH 1020
Qy 1046 VDVQOHSRHSVLVPEWEAEVSAVRCPCGNYLLRTAYKEGEGECVTIHEIENNTDE 1105
Db 1021 VDVQOHSRHSVLVPEWEAEVSAVRCPCGNYLLRTAYKEGEGECVTIHEIENNTDE 1080
Qy 1106 LKFRKCEEEVYPTDGTGNDYTAHQSTA---VCNSRMAQYEDAYEVDTTASVNYKPTY 1161
Db 1081 LKFRKCEEEVYPTDGTGNDYTAHQSTA---VCNSRMAQYEDAYEVDTTASVNYKPTY 1140
Qy 1162 EESTYDVRDNCCEYRGVYVNPPLPAGTMTKLEFPETDKNMIEIGTEGKFIYDSV 1221
Db 1141 EESTYDVRDNCCEYRGVYVNPPLPAGTMTKLEFPETDKNMIEIGTEGKFIYDSV 1200
Qy 1222 ELLLMEE 1228
Db 1201 ELLLMEE 1207

RESULT 7
US-08-459-595A-7
Sequence 7, Application US/08459595A
Patent No. 6018104

GENERAL INFORMATION:

APPLICANT: Kozel, Michael G.
APPLICANT: Desai, Nalin M.
APPLICANT: Lewis, Kelly S.
APPLICANT: Kramer, Vance C.
APPLICANT: Warren, Gregory W.
APPLICANT: Evola, Stephen V.
APPLICANT: Crossland, Lyle D.
APPLICANT: Wright, Martha S.
APPLICANT: Merlin, Ellis J.
APPLICANT: Launis, Karen L.
APPLICANT: Rothschein, Steven J.
APPLICANT: Bowman, Cindy G.
APPLICANT: Dawson, John L.
APPLICANT: Dunder, Erik M.
APPLICANT: Pace, Gary M.
APPLICANT: Surtle, Janet L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6018104artis Corporation
STREET: Patent & Trademark Dept., 520 White Plains
CITY: Tarrytown
STATE: New York
COUNTRY: USA
ZIP: 10591-9005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,595A
FILING DATE: 02-JUN-1995
CLASSIFICATION: 800

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pace, Gary M.
REGISTRATION NUMBER: 40403
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIV3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8582
TELEFAX: (919)541-8582
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-459-595A-7

Query Match 87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

Qy 27 MDLSPDARIDSLCIAEGNNINPLVSASTVQTGINIAGRILGVLPAGQIASPYSFLV 86
Db 1 MDLLPDARIDSLCIAEGNNIDPFVSASTVQTGINIAGRILGVLPAGQIASPYSFLV 60
Qy 87 GELMPGRDQWEIFLEVEQULNQOITENANRATLALQIGDSFRAYQOSLEWLENRD 146
Db 61 GELMPGRDQWEIFLEVEQULNQOITENANRATLALQIGDSFRAYQOSLEWLENRD 120
Qy 147 DARTSVLYTOYALBELDFNAMPFAIRNOEVLNVYAQANLHLLLRDASLFGSEF 206
Db 121 DARTSVLYTOYALBELDFNAMPFAIRNOEVLNVYAQANLHLLLRDASLFGSEF 180
Qy 207 GLTSOEIQRYERQVBTQDSDYCVEMVNTGLNSLGTNAASVVRYNQFRDLTLGLVD 266
Db 181 GLTSOEIQRYERQVBTQDSDYCVEMVNTGLNSLGTNAASVVRYNQFRDLTLGLVD 240
Qy 267 LVALPFSYDRTTPINTSAQLTREVTDAIGATGVNMAANWNNANPSSALETAVIRS 326
Db 241 LVALPFSYDRTTPINTSAQLTREVTDAIGATGVNMAANWNNANPSSALETAVIRS 300
Qy 327 PHLLDFLEQLTFTSSRWGATRMVWGHITIOSRPIGGGLNTSTGNTSINPVRLS 386
Db 301 PHLLDFLEQLTFTSSRWGATRMVWGHITIOSRPIGGGLNTSTGNTSINPVRLS 360
Qy 387 FFSRDVYTESYAGVLLMGILYLEPIHGVPTVRFPNRPONTFERGTANYSQYSPGLQL 446
Db 361 FFSRDVYTESYAGVLLMGILYLEPIHGVPTVRFPNRPONTFERGTANYSQYSPGLQL 420
Qy 447 KQSETELPETTERPNYESYSHLSHIGLISGRVHVYVSWTHRSADRNTTSSDSITQ 506
Db 421 KQSETELPETTERPNYESYSHLSHIGLISGRVHVYVSWTHRSADRNTTICPNRITQ 480
Qy 507 IPLYKSNLNSGYSVSGPFGTDIIRTNVNSVLSMGLNFNTSIOQRVNRVRYASQ 566
Db 481 IPLYKSNLNSGYSVSGPFGTDIIRTNVNSVLSMGLNFNTSIOQRVNRVRYASQ 540
Qy 567 TMTLRVTVGSGTTFDQGFPSPTMSANESLTSQSPFAEPVIGISNAGSQ-TAGISINNAG 625
Db 541 DPDFVSRGSGTYNNRFLRTNMSGDLKXGNVYRAFTTPPTTQDILIRTSIOGLSG 600
Qy 626 RQTFHDKIEFIDYATFEAYDLERAQEAVALFTNTNPRRLKTDYTHIDQVSNLVA 685
Db 601 NGEVYIDKIEIIPVATFEAYDLERAQEAVALFTNTNPRRLKTDYTHIDQVSNLVA 660
Qy 686 CLSDFCLDEKRELLEKVKAKRLSDERNLLODPNFTSINKOPDFTSTNOSNFTSHEQ 745
Db 661 CLSDFCLDEKRELLEKVKAKRLSDERNLLODPNFTSINKOPDFTSTNOSNFTSHEQ 720

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QY 746 SEHGAMGSENITIOEGNDVFKENYVTLPGTFNECYPTLYOKIGSESLKAYTYTQIRGYI 805
DB 721 SEHGAMGSEKITIOEGNDVFKENYVTLPGTFNECYPTLYOKIGSESLKAYTYTQIRGYI 780
QY 806 EDSODLEIYLIRNAGHETLDVPGTESVWPLSVESPIGRGCEBNRCAPEHNPDLDCSC 865
DB 781 EDSODLEIYLIRNAGHETLDVPGTESVWPLSVESPIGRGCEBNRCAPEHNPDLDCSC 840
QY 866 ROGEKCAHSHHSLDIDIGCTDLHENTLGVWVFKIKTQEGHARLGNLEFIEEKPLLGEA 925
DB 841 ROGEKCAHSHHSLDIDIGCTDLHENTLGVWVFKIKTQEGHARLGNLEFIEEKPLLGEA 900
QY 926 LSRVKAEEKMRKREKQLETRVYVTEAKAVDALFVDSQVNRLOADPTNIGITHADKL 985
DB 901 LSRVKAEEKMRKREKQLETRVYVTEAKAVDALFVDSQVNRLOADPTNIGITHADKL 960
QY 986 VHRIRAYISELVIPIGVNAIEFEELGRITTAISLYDANVYKNGDPNNGLCAWVYKGH 1045
DB 961 VHRIRAYISELVIPIGVNAIEFEELGRITTAISLYDANVYKNGDPNNGLCAWVYKGH 1020
QY 1046 VDVQSHHSVLYIPEWEAEVSQAVRVCPRGYILRTAYKBYGECVTIHEIENNTDE 1105
DB 1021 VDVQSHHSVLYIPEWEAEVSQAVRVCPRGYILRTAYKBYGECVTIHEIENNTDE 1080
QY 1106 LKFKRCEEEVYPTDTGTCNDYTAHOGTA----VCNSRNAGYDAYBVDTTASVNTKPT 1161
DB 1081 LKFKRCEEEVYPTDTGTCNDYTAHOGTA----VCNSRNAGYDAYBVDTTASVNTKPT 1140
QY 1162 BEETTYDVRRDNCEYDRGVVYVPLPAGYMTKLEFEPETDKWIEIGETESKFIVDSV 1221
DB 1141 BEETTYDVRRDNCEYDRGVVYVPLPAGYMTKLEFEPETDKWIEIGETESKFIVDSV 1200
QY 1222 ELLIMEE 1228
DB 1201 ELLIMEE 1207

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RESULT 8
US-08-459-504B-7

Sequence 7, Application US/08459504B
Patent No. 6075185

GENERAL INFORMATION:

APPLICANT: Kozielec, Michael G.
APPLICANT: Desai, Nalini M.
APPLICANT: Lewis, Kelly S.
APPLICANT: Kramer, Vance C.
APPLICANT: Warren, Gregory W.
APPLICANT: Evola, Stephen V.
APPLICANT: Crossland, Lyle D.
APPLICANT: Wright, Martha S.
APPLICANT: Merlino, Ellis J.
APPLICANT: Launius, Karen L.
APPLICANT: Rothstein, Steven J.
APPLICANT: Bowman, Cindy G.
APPLICANT: Dawson, John L.
APPLICANT: Dunder, Erik M.
APPLICANT: Pace, Gary M.
APPLICANT: Suttie, Janet L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6075185artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,504B
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/459,595
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Weig, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: CGC1577/CIP/DIV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-459-504B-7

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Query Match      87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

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QY 27 MDLSPARIEDSLCIAGNNINPLVASVYQGINAGILGLVGPFGAQLSPFSFLV 86
DB 1 MDLSPARIEDSLCIAGNNINPLVASVYQGINAGILGLVGPFGAQLSPFSFLV 60
QY 87 GELMPGRDQWEIIEHVBOLINQOTTENARNTALRLQGLGSPRAYOOSLEDMEENRD 146
DB 61 GELMPGRDQWEIIEHVBOLINQOTTENARNTALRLQGLGSPRAYOOSLEDMEENRD 120
QY 147 DATRSVLYTOYIALDELPLNMPFAIRNOEVLMLVYAQAANLHLILLRDSLPFGESEF 206
DB 121 DATRSVLYTOYIALDELPLNMPFAIRNOEVLMLVYAQAANLHLILLRDSLPFGESEF 180
QY 207 GLTSQEIQRYSRQVEQOTRDYSYCYEWNVTGSLNLRGTAAVWVYVNRRLTLGLVD 266
DB 181 GLTSQEIQRYSRQVEQOTRDYSYCYEWNVTGSLNLRGTAAVWVYVNRRLTLGLVD 240
QY 267 LVNLFPSYDTRYPINTSAQLTREYVTDALIGATGVMAASNNVNNNAPSFALETAIVRS 326
DB 241 LVNLFPSYDTRYPINTSAQLTREYVTDALIGATGVMAASNNVNNNAPSFALETAIVRS 300
QY 327 PHLLDFLEQLITFSTSSRMSATRHMTYRGHTIQSRPIGGGLNTSTHGSTNTSINPVRLS 386
DB 301 PHLLDFLEQLITFSTSSRMSATRHMTYRGHTIQSRPIGGGLNTSTHGSTNTSINPVRLS 360
QY 387 FRSRDVYTESVAGVILNGIYLEPIGVPTVRNFRNPQNTFRGRTANYSQPIESPELOL 446
DB 361 FRSRDVYTESVAGVILNGIYLEPIGVPTVRNFRNPQNTFRGRTANYSQPIESPELOL 420
QY 447 KQSETELPETTERPYVESYSHLSHIGLSQSRVAVPVYVSWTHRSADRNTTSSDSITQ 506
DB 421 KQSETELPETTERPYVESYSHLSHIGLSQSRVAVPVYVSWTHRSADRNTTSSDSITQ 480
QY 507 IPLVKSFNINSSTSVSGPFGTGGDIIRTNVNGSVLSMGLNPNNTSLQRYRVRVYVYASQ 566
DB 481 IPLVKSFNINSSTSVSGPFGTGGDIIRTNVNGSVLSMGLNPNNTSLQRYRVRVYVYASQ 540
QY 567 TMLVRYVGGSTTFDDGFPSTMSANSLTSQSRFAFPVIGISASGQ-TAGISISNAG 625
DB 541 DFDFFVSRGGTYVNNRFLATNNSGDELKYNFVRRAFTTPTFTQIQDIRTSIQGLSG 600
QY 626 ROTFHFDKIEFITPTTFAEYDLERAQAVNALFTNTNPRRLKTDVTDHIDOVSLVA 685
DB 600 ROTFHFDKIEFITPTTFAEYDLERAQAVNALFTNTNPRRLKTDVTDHIDOVSLVA 580

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Db 601 NGEVYIDKIEIPIVTAIPEAYDLERAQEAVALFTNTPRLKTDVTDHIDVSNLVA 660
Qy 686 CLSDFCLDEKRELEKRYAKRLSDERNLLQDPNFTSINKOPDISTNEQSNFTSIHQ 745
Db 661 CLSDFCLDEKRELEKRYAKRLSDERNLLQDPNFTSINKOPDISTNEQSNFTSIHQ 720
Qy 746 SEHGMMGSENIITQEGNDVPEKENVTLPGTNECYPTTLVOKIGESLAKATRRQLAGYI 805
Db 721 SEHGMMGSENIITQEGNDVPEKENVTLPGTNECYPTTLVOKIGESLAKATRRQLAGYI 780
Qy 806 EDSODLEIYLRVNAKHETLDVPGTESVWPLSVSPIGRCEPRKCAHPHEMNDLDCSC 865
Db 781 EDSODLEIYLRVNAKHETLDVPGTESVWPLSVSPIGRCEPRKCAHPHEMNDLDCSC 840
Qy 866 RDGEKCAHSHHPSLDIDICTDLHENLGVWVVFKITQEGHARLGNLFEIEXPLLGEA 925
Db 841 RDGEKCAHSHHPSLDIDICTDLHENLGVWVVFKITQEGHARLGNLFEIEXPLLGEA 900
Qy 926 LSRVKAKEKWRDREGLQLETKRVYTEAKAVDALPYDSQYRLOADTNIGMTHAADKL 985
Db 901 LSRVKAKEKWRDREGLQLETKRVYTEAKAVDALPYDSQYRLOADTNIGMTHAADKL 960
Qy 986 VHRIRAYLSLAVIPGVNAIFPEELSGRIITAI SLVDARVVGKDPNNGLACMYKCH 1045
Db 961 VHRIRAYLSLAVIPGVNAIFPEELSGRIITAI SLVDARVVGKDPNNGLACMYKCH 1020
Qy 1046 VDVQOSHRSVLVPEWEBAVSQAVRVCPRGYILRTAYKEGYGECVTIHEIENNTDE 1105
Db 1021 VDVQOSHRSVDLVPWEBAVSQAVRVCPRGYILRTAYKEGYGECVTIHEIENNTDE 1080
Qy 1106 LKRNCEEEBYPPTDTGCTNDYTHAGCTA---VCSRNAGYEDAYEVDYTAANYKPTY 1161
Db 1081 LKRNCEEEBYPPTDTGCTNDYTHAGCTACADACNRMAGYEDAYEVDYTAANYKPTY 1140
Qy 1162 EEEYTDVRBNCEYRGVYVNPPLPAGYWTKELEYPPETDKYMIETEGEFTYDSV 1221
Db 1141 EEEYTDVRBNCEYRGVYVNPPLPAGYWTKELEYPPETDKYMIETEGEFTYDSV 1200
Qy 1222 ELLLMEE 1228
Db 1201 ELLLMEE 1207

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RESULT 9
US-08-459-444-7
Sequence 7, Application US/08459444A
Patent No. 6121014
GENERAL INFORMATION:
APPLICANT: Kozziel, Michael G.
Debal, Nalini M.
Lewis, Kelly S.
Kramer, Vance C.
Warren, Gregory W.
Evola, Stephen V.
Crossland, Lyle D.
Wright, Martha S.
Merlin, Ellis J.
Lauris, Karen L.
TITLE OF INVENTION: METHOD FOR PRODUCING A PLANT-OPTIMIZED
NUCLEIC ACID CODING SEQUENCE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSER: No. 6121014artis Agribusiness Biotechnology Research, Inc.
STREET: 3054 Cornwallis Road
City: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30

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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459, 444A
FILING DATE: 02-Jun-1995
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-18805/P1/GC1577/CIP/DIV6
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-08-459-444-7

Query Match 87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

Qy 27 MDLSPPARIEDSLCIAGNANNIPVLSASTVQTGININGRLIGVGPAGQIASFYSEFLV 86
Db 1 MDLFPDARIDSLCIAGNANNIPVLSASTVQTGININGRLIGVGPAGQIASFYSEFLV 60
Qy 87 GELMPGRDOMEIPLHEVBOILNQITENANRNLARLOGISFRAYQOGLSEMLERNRD 146
Db 61 GELMPGRDOMEIPLHEVBOILNQITENANRNLARLOGISFRAYQOGLSEMLERNRD 120
Qy 147 DARTRSVLYOYIALBELDFLAMPFAIRNOEVLNVVYQAANLHLRLDASLFGSEF 206
Db 121 DARTRSVLYOYIALBELDFLAMPFAIRNOEVLNVVYQAANLHLRLDASLFGSEF 180
Qy 207 GLTSOEIQRYERROVEQTRDYSYCVIEWYNTGLNSLGTNAASVRYNORRDLTLGVLD 266
Db 181 GLTSOEIQRYERROVEQTRDYSYCVIEWYNTGLNSLGTNAASVRYNORRDLTLGVLD 240
Qy 267 LVALLPSPYDRTPYINTSAQLTREVVYDAIGATGVNNAASNNVYNNAPSSAIEFAVIRS 326
Db 241 LVALLPSPYDRTPYINTSAQLTREVVYDAIGATGVNNAASNNVYNNAPSSAIEFAVIRS 300
Qy 327 PHLLDFLEQLTIFSTSSRMGATRMVYRGHTIOSRPICGLINTSTGNTSINPYRLS 386
Db 301 PHLLDFLEQLTIFSTSSRMGATRMVYRGHTIOSRPICGLINTSTGNTSINPYRLS 360
Qy 387 PFSRDVYMTESVAGVILMGIYLEPIHGVPTVRNFRNPONTFERGTANYSQPYSPGLQL 446
Db 361 PFSRDVYMTESVAGVILMGIYLEPIHGVPTVRNFRNPONTFERGTANYSQPYSPGLQL 420
Qy 447 KDSSETLPETTRPNYESHRLSHGLSOSRVHVPVYSWTRSDRNTTSSDSTIQ 506
Db 421 KDSSETLPETTRPNYESHRLSHGLSOSRVHVPVYSWTRSDRNTTSSDSTIQ 480
Qy 507 IPLVKSFNLSGTVSVSGPFTGDIIRTVNNSVLSMGLNFNTSLSQRYRVRVRYASQ 566
Db 481 IPLVKSSELPGQTTVTVRGPFTGDIIRNTGFGFIRTVNNGPLQRIGRIRYASTV 540
Qy 567 TMYLRVTVGSGTTFDQGPSTMSANESLTSQSFRAFPVGISAGSQ-TAGISISNAG 625
Db 541 DDFEVSRGGTVANNFELRTMNSGDELKYGNFRAFTTPTFTQIODITRTSIQGLSG 600
Qy 626 RQFHDPKIEFILTATFEAYDLERAQEAVALFTNTPRLKTDVTDHIDVSNLVA 685
Db 601 NGEVYIDKIEIPIVTAIPEAYDLERAQEAVALFTNTPRLKTDVTDHIDVSNLVA 660

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QY 686 CLSDEFCLDBKRLLEKVKYAKRLSDERNLLDPNFTSINKOPDFTSTNEQSNFTSIHQ 745
DB 661 CLSDEFCLDBKRLLEKVKYAKRLSDERNLLDPNFTSINKOPDFTSTNEQSNFTSIHQ 720
QY 746 SEHGMMGSENIITQEGNDVFKENYVTLPGTFNECYPTLYOKIGESBLKAYTYOURLGYI 805
DB 721 SEHGMMGSENIITQEGNDVFKENYVTLPGTFNECYPTLYOKIGESBLKAYTYOURLGYI 780
QY 806 EDSQDEIYLIRYNAGHETLDVPGTSLWPLSVESPIGRGCBPNRCAHPHEMNPDLDCSC 865
DB 781 EDSQDEIYLIRYNAGHETLDVPGTSLWPLSVESPIGRGCBPNRCAHPHEMNPDLDCSC 840
QY 866 RDEKCAHSHHSLDIDVCTDLHENTLGVWVFKIKTQEGHARLGNLEFIEBKPLGGEA 925
DB 841 RDEKCAHSHHSLDIDVCTDLHENTLGVWVFKIKTQEGHARLGNLEFIEBKPLGGEA 900
QY 926 LSRVKAEEKKMRKREQLQLETKRVYVTEAKEAVDALFVDSQYRLOADNTNIGMTHADKL 985
DB 901 LSRVKAEEKKMRKREQLQLETKRVYVTEAKEAVDALFVDSQYRLOADNTNIGMTHADKL 960
QY 986 VHRIRAYISELSVIRPGVNAIEFELEGRITITASLYDARNVYKNGDFNNGLACMNVKGH 1045
DB 961 VHRIRAYISELSVIRPGVNAIEFELEGRITITASLYDARNVYKNGDFNNGLACMNVKGH 1020
QY 1046 VDVQOSHHSVLYIPKEAEVSAVRYCPGRGYILKRYTAYKEGYGSCCTIHEIENNTDE 1105
DB 1021 VDVQOSHHSVLYIPKEAEVSAVRYCPGRGYILKRYTAYKEGYGSCCTIHEIENNTDE 1080
QY 1106 LKFKNCEEEVPTDGTGNDYTAHQGTA----VCNSRNAGYDAVEVDPTASVNYKPTY 1161
DB 1081 LKFKNCEEEVPTDGTGNDYTAHQGTA----VCNSRNAGYDAVEVDPTASVNYKPTY 1140
QY 1162 EEEYTDVRADNCEYDRGVYVPPLEAGYTKLEVEFPEPTDKWIEIGETBEKFIYDSV 1221
DB 1141 EEEYTDVRADNCEYDRGVYVPPLEAGYTKLEVEFPEPTDKWIEIGETBEKFIYDSV 1200
QY 1222 ELLMEB 1228
DB 1201 ELLMEB 1207

RESULT 10
US-09-053-549-8
; Sequence 8, Application US/09053549
; Patent No. 6121521
; GENERAL INFORMATION:
; APPLICANT: Dasaai, Nalin
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSER: No. 6121521arlis Corporation
; STREET: 3054 Cornwallis Rd.
; CITY: Research Triangle Park
; STATE: NC
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/053,549
; FILING DATE: 01-APR-1998
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Pace, Gary M.
; REGISTRATION NUMBER: 40,403
; REFERENCE/DOCKET NUMBER: CGC 1995
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-541-8582
; TELEFAX: 919-541-8689
; INFORMATION FOR SEQ ID NO: 8:

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; SEQUENCE CHARACTERISTICS:
; LENGTH: 1207 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-053-549-8

Query Match      87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MDLSPARIEDSLCIAEGNNINPLVASTVQGINIAGILGLVGFPAQGLSPFSFLV 86
DB 1 MDLSPARIEDSLCIAEGNNIDPEVASASTVQGINIAGILGLVGFPAQGLSPFSFLV 60
QY 87 GELMPGRDQWEIETLEHVEQLINQITENARNTALARLOGIDSPFAQGLSLEDMLENRD 146
DB 61 GELMPGRDQWEIETLEHVEQLINQITENARNTALARLOGIDSPFAQGLSLEDMLENRD 120
QY 147 DARTSVLYTYVITALELDFLAMPFAIRNOQVEVPLIMVTAQAANLHLILLRDASLFGESEF 206
DB 121 DARTSVLYTYVITALELDFLAMPFAIRNOQVEVPLIMVTAQAANLHLILLRDASLFGESEF 180
QY 207 GLTSQSIQRYREROVQRTDSDYCVEMVNTGLNSLRGTAASWVRVNOFRRLTLTGVLID 266
DB 181 GLTSQSIQRYREROVQRTDSDYCVEMVNTGLNSLRGTAASWVRVNOFRRLTLTGVLID 240
QY 267 LVALLPSPYDTRTYPINTSAQLTREYVTDALGATGVMAASNNVNNNAPSALIEYAVIRS 326
DB 241 LVALLPSPYDTRTYPINTSAQLTREYVTDALGATGVMAASNNVNNNAPSALIEYAVIRS 300
QY 327 PHLLDFLEQLITPSSNSRATRMVYTGHTIQSPRIGGLNTSTHGSTNTSINPYRLS 386
DB 301 PHLLDFLEQLITPSSNSRATRMVYTGHTIQSPRIGGLNTSTHGSTNTSINPYRLS 360
QY 387 PFSRDVYMTESYAGVLLKGLYLEPIHGVPTRPNPNPONTFERGTANYSQPESPGLQ 446
DB 361 PFSRDVYMTESYAGVLLKGLYLEPIHGVPTRPNPNPONTFERGTANYSQPESPGLQ 420
QY 447 KQSETELPEETTERPNYESYSHLSHIGLSQSRVAVPYVSWTHRSADRNTTSSDSITQ 506
DB 421 KQSETELPEETTERPNYESYSHLSHIGLSQSRVAVPYVSWTHRSADRNTTSSDSITQ 480
QY 507 IPIVKSFNLSGTSVSVSPGFTGGDIIRTNVNGSVLSMGLNFNNISLDQRYRVRVYAAQ 566
DB 481 IPIVKSFNLSGTSVSVSPGFTGGDIIRTNVNGSVLSMGLNFNNISLDQRYRVRVYAAQ 540
QY 567 TMYLRYTVGSGTTFPDGPFSTMSANESLTSQSRFAEPVIGISASQSQ-TAGSISNAG 625
DB 541 DEDFVSRGGTYVNNRFLRTNMSGDELKXGNVRAFTTPTFTQIQDIIRTSIQGLSG 600
QY 626 RQTFHFDKIEFIPITATFAEYDLERAQAVNALFTNTNPRRLKTDVTDHIDQVSNLVA 685
DB 601 NGEVYIDKIEIIPVMTPEAEYDLERAQAVNALFTNTNPRRLKTDVTDHIDQVSNLVA 660
QY 686 CLSDEFCLDBKRLLEKVKYAKRLSDERNLLDPNFTSINKOPDFTSTNEQSNFTSIHQ 745
DB 661 CLSDEFCLDBKRLLEKVKYAKRLSDERNLLDPNFTSINKOPDFTSTNEQSNFTSIHQ 720
QY 746 SEHGMMGSENIITQEGNDVFKENYVTLPGTFNECYPTLYOKIGESBLKAYTYOURLGYI 805
DB 721 SEHGMMGSENIITQEGNDVFKENYVTLPGTFNECYPTLYOKIGESBLKAYTYOURLGYI 780
QY 806 EDSQDEIYLIRYNAGHETLDVPGTSLWPLSVESPIGRGCBPNRCAHPHEMNPDLDCSC 865
DB 781 EDSQDEIYLIRYNAGHETLDVPGTSLWPLSVESPIGRGCBPNRCAHPHEMNPDLDCSC 840
QY 866 RDEKCAHSHHSLDIDVCTDLHENTLGVWVFKIKTQEGHARLGNLEFIEBKPLGGEA 925
DB 841 RDEKCAHSHHSLDIDVCTDLHENTLGVWVFKIKTQEGHARLGNLEFIEBKPLGGEA 900
QY 926 LSRVKAEEKKMRKREQLQLETKRVYVTEAKEAVDALFVDSQYRLOADNTNIGMTHADKL 985

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Db 901 LSRVKAERKKRDKREKLETRKYTEAKEAVDALFVDSQYDRLQADTNIGIHADKL 960
Qy 986 VHRIRAYISELSVPGVNAIEFEELGRIITTAISLYDARVYKXGDPNNGLACMVKGH 1045
Db 961 VHRIRAYISELPVPGVNAIEFEELGRIITTAISLYDARVYKXGDPNNGLTCMVKGH 1020
Qy 1046 VDVQOQSHHRSVLYIPWEAEVSQAVRCRGRTYILRTATYAKEGGECCTIHEIENNTDE 1105
Db 1021 VDVQOQSHHRSVLYIPWEAEVSQAVRCRGRTYILRTATYAKEGGECCTIHEIENNTDE 1080
Qy 1106 LKFKNCEEEVPTDGTGCTNDYTAHOGTA----VCNRRNAGYEDAYEVDTTASVNYKPT 1161
Db 1081 LKFKNCEEEVPTDGTGCTNDYTAHOGTAHOGTACADACNSRNGYEDAYEVDTTASVNYKPT 1140
Qy 1162 EESTYTDVRDNHCEYRGVYVPPPLPAGYWKELAEYFPETDKWIBIGETGKFIYDSV 1221
Db 1141 EESTYTDVRDNHCEYRGVYVPPPLPAGYWKELAEYFPETDKWIBIGETGKFIYDSV 1200
Qy 1222 ELLIMEB 1228
Db 1201 ELLIMEB 1207

RESULT 11
US-09-547-422-7
Sequence 7, Application US/09547422
Patent No. 6320100
GENERAL INFORMATION:
APPLICANT: Kozel, Michael G.
Deest, Najim M.
Lewis, Kelly S.
Kramer, Vance C.
Warren, Gregory W.
Evola, Stephen V.
Crossland, Lyle D.
Wright, Martha S.
Meilin, Ellis J.
Launis, Karen L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6320100artis Agribusiness Biotechnology Research, Inc.
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/547,422
FILING DATE: 11-Apr-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/459,595
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Me198, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-18805H
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:

LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULAR TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-547-422-7

Query Match 87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

Qy 27 MDLSPPDARIDSDUCIAGNNINPLVSASTYQTGTNINGRILGVCPAPGAIASFYSFLV 86
Db 1 MDLPPDARIDSDUCIAGNNIDPFVSASTYQTGTNINGRILGVCPAPGAIASFYSFLV 60
Qy 87 GELMPGRDOMEFLFEVEQLINQITENARNATLAALOGISDFRAYOOSLEDMLENRD 146
Db 61 GELMPGRDOMEFLFEVEQLINQITENARNATLAALOGISDFRAYOOSLEDMLENRD 120
Qy 147 DARTSVLYTQYIALBELDFLAMPFAIRNOEYVPLMVYAQAANIHLRLDASLFGSEF 206
Db 121 DARTSVLYTQYIALBELDFLAMPFAIRNOEYVPLMVYAQAANIHLRLDASLFGSEF 180
Qy 207 GLTSQEIQRYYERQVETRDYSDYCWAWNTGLNSLGTNAASVRYNOFRRLDTLGVLD 266
Db 181 GLTSQEIQRYYERQVETRDYSDYCWAWNTGLNSLGTNAASVRYNOFRRLDTLGVLD 240
Qy 267 LVALLPESYDRTYPINTSAQLTREVTDAIGAGVNNASMMWNNNPPSAIEFTAVRS 326
Db 241 LVALLPESYDRTYPINTSAQLTREVTDAIGAGVNNASMMWNNNPPSAIEFTAVRS 300
Qy 327 PHLLDFLEQLTIFSTSSRWASATRMTRYRGHTIQSRPIGGALNTSTGNTSINPYRLS 386
Db 301 PHLLDFLEQLTIFSTSSRWASATRMTRYRGHTIQSRPIGGALNTSTGNTSINPYRLS 360
Qy 387 PFSRDVYTWESYAGVLMGIYLERHIGVPTVRNPNPONTFERGTANYQPYSPGLQL 446
Db 361 PFSRDVYTWESYAGVLMGIYLERHIGVPTVRNPNPONTFERGTANYQPYSPGLQL 420
Qy 447 KQSETELPETTERPNVESYSHRLSHGLISQSRVAVPVYSWTHRSADRNTTSSDITQ 506
Db 421 KQSETELPETTERPNVESYSHRLSHGLISQSRVAVPVYSWTHRSADRNTTSSDITQ 480
Qy 507 IPLVKSFNLSGTSVSGPGFTGDIIRTNVNSQVLSMGLNPNNTSLQRRVRVRYASQ 566
Db 481 IPLVKSFNLSGTSVSGPGFTGDIIRTNVNSQVLSMGLNPNNTSLQRRVRVRYASQ 540
Qy 567 TMLRYTVGGSTTFDQGFPSSTMSANBSLTSQSFRFAEPVGISASGQ-TAGISISNAG 625
Db 541 DPDFVSRGGTVNNFRFLRTMNSGDELKYGNFVRRAFTTPFTFTQIDIRTSIQGLSG 600
Qy 626 KQTFHDKIEPIITATFEAEYDLERAQAEVNALFTNTNRRLKTDVTDVHIQVSLVA 685
Db 601 NGEVYIDKLEIIVLTATFEAEYDLERAQAEVNALFTNTNRRLKTDVTDVHIQVSLVA 660
Qy 686 CLSDFECLDEKRELLEKVKYAKRLSDERNLQDPNFTSINKQDFISTNQSNTS1HQ 745
Db 661 CLSDFECLDEKRELLEKVKYAKRLSDERNLQDPNFTSINKQDFISTNQSNTS1HQ 720
Qy 746 SEHGMMGSENIITQEGNDVPEKENYVTLPGTFNECYPTLYVOKI GSESLKAYTRYOLRGYI 805
Db 721 SEHGMMGSENIITQEGNDVPEKENYVTLPGTFNECYPTLYVOKI GSESLKAYTRYOLRGYI 780
Qy 806 EDSQDLEIYLRNNAHETLDVGTESVWLSVSPRIGRGEPRYKCAPHENMPDLDSC 865
Db 781 EDSQDLEIYLRNNAHETLDVGTESVWLSVSPRIGRGEPRYKCAPHENMPDLDSC 840
Qy 866 RDEKCAHSHHSLDIDIGCTDHEHNGVAVVFKITQEGHARLGNLFEITEKPLLGEA 925
Db 841 RDEKCAHSHHSLDIDIGCTDHEHNGVAVVFKITQEGHARLGNLFEITEKPLLGEA 900
Qy 926 LSRVKAERKKRDKREKLETRKYTEAKEAVDALFVDSQYDRLQADTNIGIHADKL 985

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Db      901 LSRVKAEMKMDREKLEQETKRVYTEAKEAVDALFVDSQYDLQADTNIGIHADKL 960
Qy      986 VHRIRAYISELSVIEPGVNAIEFEELGRITITASIDYARNVKNGDPNGLACMNVKGH 1045
Db      961 VHRIRAYISELPIVIGVNAIEFEELGHITITSLYDARNVKNKDPNNGLCMNVKGH 1020
Qy      1046 VDVQSHHSVLIPEWEAEVSQAVNCPGGRGILNVTAYKEGYGSCCTIHEIENNTDB 1105
Db      1021 VDVQSHHSVLIPEWEAEVSQAVNCPGCGYILNVTAYKEGYGSCCTIHEIENNTDB 1080
Qy      1106 LKPKNEEEVYPTDGTGCTNDYTAHOGTA----VCNSRNAGYEDAYEVDPTASVNTKPT 1161
Db      1081 LKPKNEEEVYPTDGTGCTNDYTAHOGTACADACNSRNAGYEDAYEVDPTASVNTKPT 1140
Qy      1162 EEEYTDVDRDNHCEYDRGVNYPPLPAGYMTKELEFPEPTDKWIEIGETBEKFLVDSY 1221
Db      1141 EEEYTDVDRDNHCEYDRGVNYPPLPAGYMTKELEFPEPTDKWIEIGETBEKFLVDSY 1200
Qy      1222 ELLAMEE 1228
Db      1201 ELLAMEE 1207

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RESULT 12
US-09-988-462-7
Sequence 7, Application US/09988462
Patent No. 6720488
GENERAL INFORMATION:
APPLICANT: Kozziel, Michael G.
Deesal, Nalin M.
Lewlis, Kelly S.
Kramer, Vance C.
Warren, Gregory W.
Evoia, Stephen V.
Crossland, Lytle D.
Wright, Martha S.
Merlin, Ellis J.
Lauris, Karen L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: Syngenta Biotechnology, Inc.
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/988,462
FILING DATE: 20-NO. 6720488-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/547,422
FILING DATE: 11-APR-2000
APPLICATION NUMBER: US 08/459,504
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-188051
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689

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; INFORMATION FOR SEQ ID NO: 7:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1207 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-988-462-7

Query Match      87.4%; Score 5659.5; DB 4; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

Qy      27 MDLSPDARIEDSLCTAEGNNINPLVASASTVQGINAGILGYLPFGAQLASFTSFLV 86
Db      1 MDLTPARIEDSLCTAEGNNIDPVSASTVQGINAGILGLVGFAGQLASFTSFLV 60
Qy      87 GELMPRGDOMEFLFEBVHQLINQOITENARNTALRLGLGDSFPAQOQLSDMEENRD 146
Db      61 GELMPRGDOMEFLFEBVHQLINQOITENARNTALRLGLGDSFPAQOQLSDMEENRD 120
Qy      147 DARTSVLYTOYLAELDELPLNMPLEFAINNOEVPFLMVAQAANHLILLRDSALFSEF 206
Db      121 DARTSVLYTOYLAELDELPLNMPLEFAINNOEVPFLMVAQAANHLILLRDSALFSEF 180
Qy      207 GLTSQEIQRYYERQVQTFDYSDYCYEYNTGLNSLRGTNAASWRYNDFRDLTGVL 266
Db      181 GLTSQEIQRYYERQVQTFDYSDYCYEYNTGLNSLRGTNAASWRYNDFRDLTGVL 240
Qy      267 LVALPSPYDTRYPINTSAQLREVTDAIGATGVMAAMNWNANNAAPSALETAVIRS 326
Db      241 LVALPSPYDTRYPINTSAQLREVTDAIGATGVMAAMNWNANNAAPSALETAVIRS 300
Qy      327 PHLDLEQLITFSTSSMSATRMHTYRGHTIQSRPIGGGLNTSTHGSTNTSINPRLS 386
Db      301 PHLDLEQLITFSSASRWSNTRMTYRGHTIQSRPIGGGLNTSTHGSTNTSINPRLS 360
Qy      387 PFSRDVYMTESYAGVILKGIYLEPIHGVTVRNPNPNTERRGTANTSQPIESFGLQ 446
Db      361 PFSRDVYMTESYAGVILKGIYLEPIHGVTVRNPNPNTERRGTANTSQPIESFGLQ 420
Qy      447 KQSETELPETTERPYVESYSHLSHIGLISGRVAVPYSWTHRSADRNTTSSDSITQ 506
Db      421 KQSETELPETTERPYVESYSHLSHIGLISGRVAVPYSWTHRSADRNTTSSDSITQ 480
Qy      507 IPLVKSFNLSGTSVSGPFTGGDIIRTNVSGVLSMGLNFNNNTSLQRYRVRVYASQ 566
Db      481 IPLVKSSELPGTIVYRGPGFTGGDIIRTNVSGPPIRTVAVGPLQRYRIRYASTV 540
Qy      567 TMLRVTVGGSTTFDQGPSTMSANESLTSQSFRPAEPVGSASGSQ-TAGISISNAG 625
Db      541 DEDFFVSRGGTYVNNRFLRTMNSGDELKXGNVRAFFTPTFTQIODIIRTSIQGLSG 600
Qy      626 RQTFHFDKLEPIPTTFEAYDLERAQEAVALFTNTNPRRLKTPDTHIDQVSLVA 685
Db      601 NGEVYIDKLEIPVATFEAEYDLERAQEAVALFTNTNPRRLKTPDTHIDQVSLVA 660
Qy      686 CLSDEFCLDEKRELKRYKAKLSDERNLQDPNFTSINKQDPSTYNEQSNTSIHQ 745
Db      661 CLSDEFCLDEKRELKRYKAKLSDERNLQDPNFTSINKQDPSTYNEQSNTSIHQ 720
Qy      746 SEHGMMGSENTTQEGANDVFKENYVTLPGTFNECYPTLYLQKIGESLKAITYQLRGY 805
Db      721 SEHGMMGSENTTQEGANDVFKENYVTLPGTFNECYPTLYLQKIGESLKAITYQLRGY 780
Qy      806 EDSQDLEIYLIRYNAHEPILDVGTESVWPLSVESPIGRGSENRCAHPHEMPDLDSC 865
Db      781 EDSQDLEIYLIRYNAHEPILDVGTESVWPLSVESPIGRGSENRCAHPHEMPDLDSC 840
Qy      866 RDEKCAHSHHSFLDIDIGCTDLHNLGWVVFVKITQEGHARLGNLEFIEEKPLLGEA 925
Db      841 RDEKCAHSHHSFLDIDIGCTDLHNLGWVVFVKITQEGHARLGNLEFIEEKPLLGEA 900

```


Qy 926 LSRVKAERKMRDRKREKLOLEKRVTEAKAVDALFVDSOYNLQADPTNIGMHAADKL 985
 Db 901 LSRVKAERKMRDRKREKLOLEKRVTEAKAVDALFVDSOYNLQADPTNIGMHAADKL 960
 Qy 986 VHRIRAYLSLSVYPCVNAEIPFELEGRIITTAISLYDARVYKNGSPNNGLACMYKSH 1045
 Db 961 VHRIRAYLSLSVYPCVNAEIPFELEGRIITTAISLYDARVYKNGSPNNGLACMYKSH 1020
 Qy 1046 VDVQOSSHRSVLVPIPEWAEVSAVRVCPGRGYTLRTATYKGYEGCVTIHEIENNTDE 1105
 Db 1021 VDVQOSSHRSVLVPIPEWAEVSAVRVCPGRGYTLRTATYKGYEGCVTIHEIENNTDE 1080
 Qy 1106 LKRNCEEEVYPTDCTCNDYTAHOGTA---VCNSRNAGYERAVYDVTATVNYKFTY 1161
 Db 1081 LKRNCEEEVYPTDCTCNDYTAHOGTAHOGTACADACNSRNAGYERAVYDVTATVNYKFTY 1140
 Qy 1162 EESTYTDVRDNHCEYRGVYVNPPLPAGYMTKELEYFETDKWIEIGETGKFIYDSV 1221
 Db 1141 EESTYTDVRDNHCEYRGVYVNPPLPAGYMTKELEYFETDKWIEIGETGKFIYDSV 1200
 Qy 1222 ELLIMEE 1228
 Db 1201 ELLIMEE 1207

RESULT 13

US-09-053-549-2

Sequence 2, Application US/09053549

Patent No. 6121521

GENERAL INFORMATION:

APPLICANT: Deseat, Najint

TITLE OF INVENTION: No. 6121521el Insecticidal Protein and Gene

NUMBER OF SEQUENCES: 8

CORRESPONDENCE ADDRESS:

ADDRESSEE: No. 6121521arlis Corporation

STREET: 3054 Cornwallis Rd.

CITY: Research Triangle Park

STATE: NC

COUNTRY: USA

ZIP: 27709

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/053,549

FILING DATE: 01-Apr-1998

CLASSIFICATION: 800

ATTORNEY/AGENT INFORMATION:

NAME: Pace, Gary M.

REGISTRATION NUMBER: 40,403

REFERENCE/DOCKET NUMBER: CGC 1995

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919-541-8582

TELEFAX: 919-541-8589

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 1227 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-09-053-549-2

Query Match 83.9%; Score 5436.5; DB 3; Length 1227;
 Best Local Similarity 84.3%; Pred. No. 0;
 Matches 1040; Conservative 63; Mismatches 118; Indels 13; Gaps 5;

Qy 1 LTSNRKNEIINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVOTGI 60
 Db 1 MTSNRKNEIIN-----AVSNHSAQMDLDPARIEDSLCIAEGNNIDPVSASTVOTGI 55
 Qy 61 NTAAGILGVLPFAGQIASFYSFLVGEIWPGRDQWEIFLEHVEQLINQOITENARNTA 120

Db 56 NIAGRIIGVLGVPPAGQIASFYSFLVGEIWPGRDQWEIFLEHVEQLINQOITENARNTA 115
 Qy 121 LARLOGLSDSPRAVOQSLDEWLEBRDARTSVYVOTYIALELFLNAMPFAIRNORVP 180
 Db 116 LARLOGLSDSPRAVOQSLDEWLEBRDARTSVYVOTYIALELFLNAMPFAIRNORVP 175
 Qy 181 LAMVYAAMILHLLLDASLFGSEFGLTSGEIORYERQVROQTRDYSDYCVEMVNTGLN 240
 Db 176 LAMVYAAMILHLLLDASLFGSEFGLTSGEIORYERQVROQTRDYSDYCVEMVNTGLN 235
 Qy 241 SLRGTAASWVRVNOFRRDLTLGLDLVALPSPDTTTPYNTSAQLTREYTTAIGATG 300
 Db 236 SLRGTAASWVRVNOFRRDLTLGLDLVALPSPDTTTPYNTSAQLTREYTTAIGATG 295
 Qy 301 VNMAAMNMYNNNAPSFAIEPAVIRSPHLDFLEQLTFSSRMSATRHMTYRGHTIQ 360
 Db 296 VNMAAMNMYNNNAPSFAIEPAVIRSPHLDFLEQLTFSSRMSATRHMTYRGHTIQ 355
 Qy 361 SRPIGGGLNTSTHGSINTSINPVLSPFSRDVVTESYAGVLMGIYLEPIHGVPTVRFN 420
 Db 356 SRPIGGGLNTSTHGSINTSINPVLSPFSRDVVTESYAGVLMGIYLEPIHGVPTVRFN 415
 Qy 421 FRNPQTFERGTYANSQPYSPGLQLOKOSTELPPTTERPNYSYSHRSLHIGLISOR 480
 Db 416 FRNPQNTSDRGTYANSQPYSPGLQLOKOSTELPPTTERPNYSYSHRSLHIGLISOR 475
 Qy 481 VHPVVSWTHRSADRNTTISDSITQIPLVKSFNLSGTSVSGRGYTGDIIRNTNNGS 540
 Db 476 VHPVVSWTHRSADRNTTIGENRTIQLPMVNASLPGGTVVRKGGTGGILRRNTTG 535
 Qy 541 VLSGILNFNTSLOREVRVRYAASQTMVLRVTVGSGSTPDGSPSTMANESLTSOSFR 600
 Db 536 FGPIRVTVNGPLQGRVYIGFRVASTVDPDFVNSGCTVANNFRLRNMSDELKYNFV 595
 Qy 601 PABPVGISASGCT-AGISISNAGRQTHFDKIEPIPTATPBAVYDLERAQAVNAL 659
 Db 596 RRAFTPTPTFOIONTIRTSIOGLSGNGEYIDKIEIIPVATPBAVYDLERAQAVNAL 655
 Qy 660 FTNTPRLKTDVTDYHIDQVSNLVACTSDFCDEKRELEKRYAKRLSDENLLODP 719
 Db 656 FTNTPRLKTDVTDYHIDQVSNLVACTSDFCDEKRELEKRYAKRLSDENLLODP 715
 Qy 720 NPTSINKQDPFISTNESNFTSIHSESHGMSGNITIOGNDVFENYVTLPGTNEC 779
 Db 716 NPTSINKQDPFISTNESNFTSIHSESHGMSGNITIOGNDVFENYVTLPGTNEC 775
 Qy 780 YPTLYLYOKIGESSELKATRYQLRGYIRDSQDLIYILRYNAKHETLDVPGTESVPLSYE 839
 Db 776 YPTLYLYOKIGESSELKATRYQLRGYIRDSQDLIYILRYNAKHETLDVPGTESVPLSYE 835
 Qy 840 SPYGRCEPNRCAHPHBNPDLDCSCPDGKCAHSHHPSLDDIGCTDLHENVGVVVF 899
 Db 836 SPYGRCEPNRCAHPHBNPDLDCSCPDGKCAHSHHPSLDDIGCTDLHENVGVVVF 895
 Qy 900 KITQEGHARLGNLEPIEERPLGEALSRVRAEKWRDRKLOLETKRYTEAKAVD 959
 Db 896 KITQEGHARLGNLEPIEERPLGEALSRVRAEKWRDRKLOLETKRYTEAKAVD 955
 Qy 960 ALFVDSQYNRLQADPTNIGMHAADKLVHRIRAYLSLSVYPCVNAEIPFELEGRIITAI 1019
 Db 956 ALFVDSQYNRLQADPTNIGMHAADKLVHRIRAYLSLSVYPCVNAEIPFELEGRIITAI 1015
 Qy 1020 SLVDARVYKNGSPNNGLACMYKSHVADV-QQSHRSVYVPIPEWAEVSAVRVCPGRGY 1078
 Db 1016 SLVDARVYKNGSPNNGLACMYKSHVADV-QQSHRSVYVPIPEWAEVSAVRVCPGRGY 1075
 Qy 1079 ILRTAYKGYGCGVTYIHEIENNTDELKPKNCEEEVYPTDGTGNDYTA---HOGTA 1134
 Db 1076 ILRTAYKGYGCGVTYIHEIENNTDELKPKNCEEEVYPTDGTGNDYTA---HOGTA 1134
 Qy 1135 VCNRNAGYEDAYEDVTASVNYKFTYEEETYTDVRDNHCEYRGVYVNPPLPAGYMTK 1194

Db 1135 -YTSNRKRGIDGAVESNSVPADYASAVEEKAATYDGRDNDPCBSNRGXYGDTPLPAGYVTK 1193

QY 1195 ELEFPETDKWIEIGETEGKPIVDSVELLMBE 1228

Db 1194 ELEFPETDKWIEIGETEGKPIVDSVELLMBE 1227

RESULT 14

US-08-100-709-4

Sequence 4, Application US/08100709

Patent No. 5322687

GENERAL INFORMATION:

APPLICANT: Donovan, William P.

APPLICANT: Tan, Yeping

APPLICANT: Jany, Christine S.

APPLICANT: Gonzalez Jr., Jose M.

TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5

TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS

NUMBER OF SEQUENCES: 5

CORRESPONDENCE ADDRESSES:

ADDRESSEE: Paulsch Schwarz Jacobs & Nadel c/o A.S.

STREET: 1601 Market Street, 36th Floor

CITY: Philadelphia

STATE: Pennsylvania

COUNTRY: U.S.A.

ZIP: 19103

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/100,709

FILING DATE: 19930729

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Egolf, Christopher

REGISTRATION NUMBER: 27633

REFERENCE/DOCKET NUMBER: 7205-49

TELECOMMUNICATION INFORMATION:

TELEPHONE: 215-757-1590

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 1229 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-100-709-4

Query Match 80.8%; Score 5237.5; DB 1; Length 1229;

Best Local Similarity 79.9%; Pred. No. 0;

Matches 983; Conservative 94; Mismatches 149; Indels 5; Gaps 3;

QY 1 LTNRRKNEEIIAALSTPAVSNHSTQMDLSPDARIEDSLCAGANNINPLVASTVOTGI 60

Db 1 LTNRRKNEEIIAALSTPAVSNHSTQMDLSPDARIEDSLCAGANNINPLVASTVOTGI 60

QY 61 NINGRLIGVGVPAGGIAAFYSFLVGEIEMPRGDQWEIIEHVEQLIRQOVTENRNTA 120

Db 61 NINGRLIGVGVPAGGIAAFYSFLVGEIEMPRGDQWEIIEHVEQLIRQOVTENRNTA 120

QY 121 LARLQGLGDSFRAVQOSLEDMLENRDARTRSVLYTOYIALALEDLFLNAMPFAIRNQEV 180

Db 121 LARLQGLGDSFRAVQOSLEDMLENRDARTRSVLYTOYIALALEDLFLNAMPFAIRNQEV 180

QY 181 LLMVYAQAANLHLILDLASLPGSEFGLTSQEIQRYYERQVEQTRDYSDYCVEMNTGLN 240

Db 181 LLMVYAQAANLHLILDLASLPGSEFGLTSQEIQRYYERQVEQTRDYSDYCVEMNTGLN 240

QY 241 SLAGTNAASVVRNQPFRDLTLGLDLVVALPSPVDTFTYPLNLSAOLTRREYVDAIGATG 300

Db 241 SLAGTNAASVVRNQPFRDLTLGLDLVVALPSPVDTFTYPLNLSAOLTRREYVDAIGATG 300

QY 301 V--NNASNNVNNNAPSFSAIETAVIRSHLLDLFELQLITFTSSRWASATRHNTYRGHT 358

Db 301 ASGCFASITWFMNNAAPSFSAIETAVIRSHLLDLFELQLITFTSSRWASATRHNTYRGHT 358

QY 359 IQRPIGGLANTSTHGST-NTSINPVRLSPFSRDVYWTSSYAGVLMLGILBPIHIGPTV 417

Db 359 IQRPIGGLANTSTHGST-NTSINPVRLSPFSRDVYWTSSYAGVLMLGILBPIHIGPTV 417

QY 418 RNFNRNPONTFERGTANYQAPYESPGLOKDSLELPETTERPNYESYSHRLSHIGLIS 477

Db 418 RNFNRNPONTFERGTANYQAPYESPGLOKDSLELPETTERPNYESYSHRLSHIGLIS 477

QY 478 QSRVHVPTVSWTHRSADRNTTSSDSITQIPLYKSNLNSGTSVSGPGTGGDIIRTV 537

Db 478 QSRVHVPTVSWTHRSADRNTTSSDSITQIPLYKSNLNSGTSVSGPGTGGDIIRTV 537

QY 538 NSGVLMSGNPNNTSLQRYRVRYVAASQTMVLRYVGSSTPDQGFPSMSANESLTSQ 597

Db 538 NSGVLMSGNPNNTSLQRYRVRYVAASQTMVLRYVGSSTPDQGFPSMSANESLTSQ 597

QY 598 SFRAEPFVGISASGQTAGISISNNAGRTQFHFDEKIEFPIVATPEAEYDLERAQAVN 657

Db 598 SFRAEPFVGISASGQTAGISISNNAGRTQFHFDEKIEFPIVATPEAEYDLERAQAVN 657

QY 658 ALFTNTPRLKTDVTHIIDVYSNLVACLSDBFCLEKRELEKYAKRLSDERNLQ 717

Db 658 ALFTNTPRLKTDVTHIIDVYSNLVACLSDBFCLEKRELEKYAKRLSDERNLQ 717

QY 718 DNFETSIKOPDEISNBSQNFISIHGSEHGWSSENTIOBGNVFKENYVTLPGTEN 777

Db 718 DNFETSIKOPDEISNBSQNFISIHGSEHGWSSENTIOBGNVFKENYVTLPGTEN 777

QY 778 ECPYLYOKIGESSEKAYTRYQLRGYIEDSODLEIYLRYNKAKHETLDVPGTESVWPLS 837

Db 778 ECPYLYOKIGESSEKAYTRYQLRGYIEDSODLEIYLRYNKAKHETLDVPGTESVWPLS 837

QY 838 VESPIRCGEPRNCAPHFEMNPDLDCSCRDGECACAHSHHFSLDIDIGCTDHEHNGVW 897

Db 838 VESPIRCGEPRNCAPHFEMNPDLDCSCRDGECACAHSHHFSLDIDIGCTDHEHNGVW 897

QY 898 VFPIKTQEBGARLGNLEFIEBKPLDGEALSRVYRAKKRDKREKLOLEKRYVTEAKEA 957

Db 898 VFPIKTQEBGARLGNLEFIEBKPLDGEALSRVYRAKKRDKREKLOLEKRYVTEAKEA 957

QY 958 VDALLFYDSQYNRLOADNTIGMTHAADKLVHRIEAYLSBELSVIPGVNAEIFEELBGRIT 1017

Db 958 VDALLFYDSQYNRLOADNTIGMTHAADKLVHRIEAYLSBELSVIPGVNAEIFEELBGRIT 1017

QY 1018 AILSYDARVYVKNKGDFNNGLACNNVKGHYDVQOSSHRSVLVIPMEAEVSQAVRVCPRG 1077

Db 1018 AILSYDARVYVKNKGDFNNGLACNNVKGHYDVQOSSHRSVLVIPMEAEVSQAVRVCPRG 1077

QY 1078 YILRYTAYKRGYGEQCVTHIETENNTDELKFKCSEEEVYPTGTGNDTAAOGTAVCN 1137

Db 1078 YILRYTAYKRGYGEQCVTHIETENNTDELKFKCSEEEVYPTGTGNDTAAOGTAVCN 1137

QY 1138 SRNAGYEDAYEVDTTASVYVKKPYEEETTYDVARDNHCEYDRGVYVPPYPAGVYTELE 1197

Db 1138 SRNAGYEDAYEVDTTASVYVKKPYEEETTYDVARDNHCEYDRGVYVPPYPAGVYTELE 1197

QY 1198 YFPETDKWIEIGETEGKPIVDSVELLMBE 1228

Db 1198 YFPETDKWIEIGETEGKPIVDSVELLMBE 1228

RESULT 15

US-08-176-865-4

Sequence 4, Application US/08176865

Patent No. 5616319

GENERAL INFORMATION:

APPLICANT: Donovan, William P.

APPLICANT: Tan, Yeping

APPLICANT: Jany, Christine S.
 TITLE OF INVENTION: BACILLUS THURINGIENSIS cryET4 AND cryET5
 TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
 NUMBER OF SEQUENCES: 5
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Paultech Schwaerze Jacobs & Nadel c/o A.S.
 ADDRESSEE: Nadel
 STREET: 1601 Market Street, 16th Floor
 CITY: Philadelphia
 STATE: Pennsylvania
 COUNTRY: U.S.A.
 ZIP: 19103
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent In Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/176,865
 FILING DATE: 30-DEC-1993
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/100,709
 FILING DATE: 29-JUL-1993
 ATTORNEY/AGENT INFORMATION:
 NAME: Egolf, Christopher
 REGISTRATION NUMBER: 27633
 REFERENCE/DOCKET NUMBER: 7205-49
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 215-757-1590
 INFORMATION FOR SEQ ID NO: 4:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1229 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-176-865-4

Query Match 80.8%; Score 5237.5; DB 1; Length 1229;

Best Local Similarity 79.9%; Pred. No. 0;
Matches 983; Conservative 94; Mismatches 149; Indels 5; Gaps 3;

QY 1 LTNRNKRENIINALSIPAVSNHSTQDLSPPARIEDSLCAGNNINPLVSASTVGTGI 60
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 DB 61 NIAGRILGVLPFAQIASFYSLVGLMPPRGDWEIPLHVEQLINQITENARNTA 120
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 DB 121 LARLOGIGDSFRAYOOSLEDMLENRDARTSVLYTQYIALDELPLNAMPFAIRNOEVP 180
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 DB 181 LLMVYAQAANLHLLLRDASLFGSEFGLTSQEIQRYYEROVEQTRDYSDYCEVMYTGILN 240
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 DB 241 SLRGTAASVVRVNRDRDLTLGLVLLVLPSTYDTRTYPIINTSAQLTREVTDAIGATG 300
 QY 301 V--NMASMMYNNNASFSFAIETAVIRSPHLDPLEQLTIFSTSRMSATRHMTYRGHT 358
 DB 301 V--NMASMMYNNNASFSFAIETAVIRSPHLDPLEQLTIFSTSRMSATRHMTYRGHT 358
 QY 359 IGSRIPIGGIGINTSTHST-NTSINPVRLSPFSRDVYWTBSYAGVLLMGILYLBPIHGVPTV 417
 DB 359 IGSRIPIGGIGINTSTHST-NTSINPVRLSPFSRDVYWTBSYAGVLLMGILYLBPIHGVPTV 417
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 DB 479 GNTLRARVSVWTHRSADRTNTIGPNRITQIPLVKAALNHSQVTVVGGPGFTGDIIRTNV 538
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 DB 539 TGTPTGDIRLININPLSQRVVRIRYASTTDLQFETTRINGTTVINIGNSRTNRRDNLREYR 598
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 DB 839 VESPIGRGEPNRCAPFENNPLDSCRDGEKCAHSHHFTDIDIGCTDLHNLGVWV 898
 QY 898 VPKIKTOEGHARLGNTEFIEKPLIGALSRLVRAEKWMDKEKQLETKRVYTEAKEA 957
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 QY 958 VDALLFVDSQVNRLOADNTNIGMIAADLVHRIEAYISELSVPGVNAELPELEGHIT 1017
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 DB 1139 SRNAGYEDAEVDTTASVANKPYEEBETTYDVARDNHCERDROGVNYPPLPAGYMTGELE 1198
 QY 1198 YPPETDKVMIEIGTEGKFIYDSVELLMEE 1228
 DB 1199 YPPETDKVMIEIGTEGKFIYDSVELLMEE 1229

Search completed: May 24, 2005, 14:13:54
Job time : 52 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: May 24, 2005, 14:10:21 ; Search time 164 Seconds
(without alignments)
2504.728 Million cell updates/sec

Title: US-10-614-524-2
Perfect score: 6479
Sequence: 1 LTSNRKNEETINALSTIPAV.....IGTEGKFTVDSVLLMEER 1228

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1434725 seqs, 334507595 residues

Total number of hits satisfying chosen parameters: 1434725

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

Published Applications AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep.*
3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep.*
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8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
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17: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
18: /cgn2_6/ptodata/1/pubpaa/US11_NEW_PUB.pep.*
19: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep.*
20: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	6464	99.8	1228	15	US-10-428-961-38
3	5912.5	91.3	1227	15	US-10-428-961-63
4	5745	88.7	1228	17	US-10-926-819-8
5	5742	88.6	1228	16	US-10-809-953-10
6	5659.5	87.4	1207	10	US-09-988-462-7
7	5108	78.8	1186	9	US-09-826-660-23
8	3502.5	54.1	1189	10	US-09-972-175-59
9	3502.5	54.1	1189	14	US-10-200-522-59
10	3500.5	54.0	1189	10	US-09-972-175-2
11	3500.5	54.0	1189	14	US-10-200-522-2
12	3496.5	54.0	1189	10	US-09-972-175-61
13	3496.5	54.0	1189	14	US-10-200-522-61

14	3495.5	54.0	1189	16	US-10-782-020-7	Sequence 7, Appl1
15	3495.5	54.0	1189	17	US-10-926-819-9	Sequence 9, Appl1
16	3494.5	53.9	1189	10	US-09-972-175-4	Sequence 4, Appl1
17	3494.5	53.9	1189	10	US-09-972-175-6	Sequence 6, Appl1
18	3494.5	53.9	1189	14	US-10-200-522-4	Sequence 4, Appl1
19	3494.5	53.9	1189	14	US-10-200-522-6	Sequence 6, Appl1
20	3493.5	53.9	1189	10	US-09-972-175-12	Sequence 12, Appl1
21	3493.5	53.9	1189	14	US-10-200-522-12	Sequence 12, Appl1
22	3490.5	53.9	1189	10	US-09-972-175-8	Sequence 8, Appl1
23	3490.5	53.9	1189	14	US-10-200-522-8	Sequence 8, Appl1
24	3487.5	53.8	1189	10	US-09-972-175-10	Sequence 10, Appl1
25	3487.5	53.8	1189	14	US-10-200-522-10	Sequence 10, Appl1
26	3482.5	53.8	1189	16	US-10-809-953-8	Sequence 8, Appl1
27	3479.5	53.7	1189	14	US-10-102-469-20	Sequence 20, Appl1
28	3476.5	53.7	1189	11	US-09-937-961-6	Sequence 6, Appl1
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30	3463	53.4	1181	10	US-09-988-462-11	Sequence 11, Appl1
31	3463	53.4	1181	10	US-09-988-462-13	Sequence 13, Appl1
32	3463	53.4	1181	10	US-09-988-462-17	Sequence 17, Appl1
33	3463	53.4	1181	10	US-09-988-462-28	Sequence 28, Appl1
34	3463	53.4	1181	15	US-10-136-998A-4	Sequence 4, Appl1
35	3463	53.4	1181	15	US-10-136-998A-8	Sequence 8, Appl1
36	3463	53.4	1181	15	US-10-136-998A-10	Sequence 10, Appl1
37	3463	53.4	1181	15	US-10-136-998A-12	Sequence 12, Appl1
38	3460	53.4	1193	9	US-09-873-873-30	Sequence 30, Appl1
39	3460	53.4	1193	10	US-09-916-956A-30	Sequence 30, Appl1
40	3460	53.4	1193	10	US-09-997-914-30	Sequence 30, Appl1
41	3460	53.4	1193	14	US-10-365-645-30	Sequence 30, Appl1
42	3460	53.4	1193	15	US-10-672-163-30	Sequence 30, Appl1
43	3460	53.4	1193	16	US-10-739-482-30	Sequence 30, Appl1
44	3460	53.4	1193	16	US-10-817-182-30	Sequence 30, Appl1
45	3459	53.4	1177	9	US-09-873-873-10	Sequence 10, Appl1

ALIGNMENTS

RESULT 1
US-10-614-524-2
: Sequence 2, Application US/10614524
: Publication No. US20040016020A1
: GENERAL INFORMATION:
: APPLICANT: Arnaud, Greta
: APPLICANT: Boets, Annette
: APPLICANT: Dammé, Nicole
: APPLICANT: Mathieu, Eva
: APPLICANT: Vanste, Stijn
: TITLE OF INVENTION: Insecticidal proteins from *Bacillus thuringiensis*.
: FILE REFERENCE: NEMTSUS2
: CURRENT APPLICATION NUMBER: US/10/614,524
: CURRENT FILING DATE: 2003-07-08
: PRIOR APPLICATION NUMBER: US/09/739,243
: PRIOR FILING DATE: 2000-12-19
: PRIOR APPLICATION NUMBER: 60/173387
: PRIOR FILING DATE: 1999-12-28
: NUMBER OF SEQ ID NOS: 13
: SOFTWARE: PatentIn Ver. 2.0
: SEQ ID NO 2
: LENGTH: 1228
: TYPE: PRT
: ORGANISM: *Bacillus thuringiensis*
: US-10-614-524-2

Query Match 100.0%; Score 6479; DB 15; Length 1228;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1228; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 LTSNRKNEETINALSTIPAVSNHSTOMDLSPPDRIRBDSLCIARGNNINPLVASTVGTGI 60
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Db	181	LLMYVAQAANTHLHLILDASLFGSEFGLTSGOIQRYERQVBPQRDYSDCVEMYNTGLN	240
Qy	241	SLRGNAASWRYNOFRBDLTGLVDIALPSSYOTRYPINTSAQILREYVYTAGATG	300
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Qy	301	VNMASMMYNNANPASFSAIETAVIRSPHLDFLEQLITFSTSRSASARHMTYRGHTIQ	360
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Qy	361	SRPIGGJLNTSTHGSTNTSINPVRLSPPSRDVTYTESYAGVILMGIYLEPIHGVPTVREN	420
Db	361	SRPIGGJLNTSTHGSTNTSINPVRLSPPSRDVTYTESYAGVILMGIYLEPIHGVPTVREN	420
Qy	421	FRNPQNTBERGTANNSQPYESPGLQKQSEFTELPEPTEPRPYBESYSHLSHIGLISGR	480
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Qy	481	VHVPPYSWTHRSADRTNTISSDSITQIPLVYSFNLNGSTSVSGGFGGDIIRTNVGS	540
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Qy	661	TNTNPRRKTDVTDYHIDOVSNLVAQLDEPCLDKEKLEKVKYAKKLSDBRNILQDPN	720
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Qy	781	PTYLYQKIGESBLKAYTRYQLRGYIEBSODLEIYLIRNNAKHETLDVGTESWPLSVES	840
Db	781	PTYLYQKIGESBLKAYTRYQLRGYIEBSODLEIYLIRNNAKHETLDVGTESWPLSVES	840
Qy	841	PIGRGGEENRCAPHHEMNPDJCSRODEKCAHSHHNSLDDIGCTDLHNLGWWVYFX	900
Db	841	PIGRGGEENRCAPHHEMNPDJCSRODEKCAHSHHNSLDDIGCTDLHNLGWWVYFX	900
Qy	901	IKTOGCHARLGNLEFIEBKPLLGELALSVKAEKKMRPKEKLOLETKRYVTEAKEAVDA	960
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Qy	961	LFPVDSQYNRLQADNTIGMIHAADKLVHRIREAYISELSVTPGVNAEIFEELBGRITTAIS	1020
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Db	1201	ETDKWIEIGETGKPIVDSVELLMEE	1228
RESULT 2			
US-10-428-961-38			
; Sequence 38, Application US/10428961			
; Publication No. US20030237111A1			
; GENERAL INFORMATION:			
; APPLICANT: Baum, James A.			
; APPLICANT: Chu, Chin-Wei			
; APPLICANT: Donovan, William P.			
; APPLICANT: Gilmer, Amy J.			
; APPLICANT: Ruper, Mark J.			
; TITLE OR INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin			
; TITLE OR INVENTION: Polynucleotides, Compositions, and Methods of Use (Amended)			
; FILE REFERENCE: MCO201--1			
; CURRENT APPLICATION NUMBER: US/10/428,961			
; PRIOR FILING DATE: 2003-05-02			
; PRIOR APPLICATION NUMBER: 09/661,322			
; PRIOR FILING DATE: 2000-09-13			
; PRIOR APPLICATION NUMBER: 60/153,995			
; PRIOR FILING DATE: 1999-09-15			
; NUMBER OF SEQ ID NOS: 63			
; SOFTWARE: PatentIn version 3.2			
; SEQ ID NO 38			
; LENGTH: 1228			
; TYPE: PRT			
; ORGANISM: Bacillus thuringiensis			
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DB 601 PAFEPVGISASGSOTAGISISNNAGROTHPHDKIEPIPIATPFAEYDLERAQEAVALF 660
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QY 841 PIGRCGEPRNCAPHFENWPDLDGSCRDGKCAHSHHSFLDIDIGCTDLHENLGWVWVFK 900
DB 841 PIGRCGEPRNCAPHFENWPDLDGSCRDGKCAHSHHSFLDIDIGCTDLHENLGWVWVFK 900
QY 901 IKTOEGHARLGNLEFIEKPLGEBALSRYRAEKKWDKREKQLQLETKRVYTEAKEAVDA 960
DB 901 IKTOEGHARLGNLEFIEKPLGEBALSRYRAEKKWDKREKQLQLETKRVYTEAKEAVDA 960
QY 961 LFPDQOYNRLQADTNIGMHAADKLVHRIEAYLSELSVYPGVNAEJFEELEGRITTAIS 1020
DB 961 LFPDQOYNRLQADTNIGMHAADKLVHRIEAYLSELSVYPGVNAEJFEELEGRITTAIS 1020
QY 1021 LYDARVNVKGDFFNGLACMNVKGVVQSHRSVLVPIPEWEAEVSOAVRCPGRGYIL 1080
DB 1021 LYDARVNVKGDFFNGLACMNVKGVVQSHRSVLVPIPEWEAEVSOAVRCPGRGYIL 1080
QY 1081 RVTAYKEGVEGCVTIHEINNTDELKFKNCEBEVYPTDTGTCNDYTAHQTAVCNSRN 1140
DB 1081 RVTAYKEGVEGCVTIHEINNTDELKFKNCEBEVYPTDTGTCNDYTAHQTAVCNSRN 1140
QY 1141 AGEDAEVDTTASVNVKFTYEEETTDVARDNHCEVDRGVNVPPLPAGYMKTELEYF 1200
DB 1141 AGEDAEVDTTASVNVKFTYEEETTDVARDNHCEVDRGVNVPPLPAGYMKTELEYF 1200
QY 1201 ETDKWIIEIGETGKFLVDSVLELLME 1228
DB 1201 ETDKWIIEIGETGKFLVDSVLELLME 1228

RESULT 3
US-10-428-961-63
; Sequence 63, Application US/10428961
; Publication No. US2003023711A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
; APPLICANT: Chu, Chih-Rei
; APPLICANT: Donovan, William P.
; APPLICANT: Gilmer, Amy J.
; APPLICANT: Ruper, Mark J.
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin
; FILE REFERENCE: Polynucleotides, Compositions, and Methods of Use (Amended)
; CURRENT APPLICATION NUMBER: US/10/428, 961
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: 09/661,322
; PRIOR FILING DATE: 2000-09-13
; PRIOR APPLICATION NUMBER: 60/153,995
; PRIOR FILING DATE: 1999-09-15
; NUMBER OF SEQ ID NOS: 63
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 63
; LENGTH: 1227

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; TYPE: PR
; ORGANISM: Bacillus thuringiensis
US-10-428-961-63
Query Match 91.3%; Score 5912.5; DB 15; Length 1227;
Best Local Similarity 91.6%; Pred. No. 0;
Matches 1127; Conservative 36; Mismatches 62; Indels 5; Gaps 3;

QY 1 LTSNRKNEEIIINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVGTGI 60
DB 1 LTSNRKNEEIIINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVGTGI 60
QY 61 NIAGRILIGVCPAGGASIPSYFVGLMIPRGDQWEIIEHVEQULINOITENAPNTA 120
DB 61 NIAGRILIGVCPAGGASIPSYFVGLMIPRGDQWEIIEHVEQULINOITENAPNTA 120
QY 121 LARLOGDSFRAVQOSLEDMLENRDAPRSVLYOYIALEDFLAMPALRNOEVP 180
DB 121 LARLOGDSFRAVQOSLEDMLENRDAPRSVLYOYIALEDFLAMPALRNOEVP 180
QY 181 LLMVYAQAANIHLILLRDAFLPGSEFGLTSQEIORYEROVEQTRDSDYCEWENTGLN 240
DB 181 LLMVYAQAANIHLILLRDAFLPGSEFGLTSQEIORYEROVEQTRDSDYCEWENTGLN 240
QY 241 SLRGTAASVVRVNOQFRDITLGLVDLVALPSSYDTRFTYINTSAQLTREYTTDAIGATG 300
DB 241 SLRGTAASVVRVNOQFRDITLGLVDLVALPSSYDTRFTYINTSAQLTREYTTDAIGATG 300
QY 301 V--NMASMMVNNNABSPSAIEFRAVRSRPHLDPELOLTFTSSRSRATRMTYMGHT 358
DB 301 V--NMASMMVNNNABSPSAIEFRAVRSRPHLDPELOLTFTSSRSRATRMTYMGHT 358
QY 359 IQSRPIGGLANTSTHGSTNTSINPVLSPFSRDVMTESYAGVILMGIYLEPIHGVPTVR 418
DB 359 IQSRPIGGLANTSTHGSTNTSINPVLSPFSRDVMTESYAGVILMGIYLEPIHGVPTVR 418
QY 419 ENFRNPONTFERGTANYSPQSPGLQKDSFELPEPETERPNYESYHRLSHIGLSQ 478
DB 419 ENFRNPONTFERGTANYSPQSPGLQKDSFELPEPETERPNYESYHRLSHIGLSQ 478
QY 478 SRVHPVYVSWTHSARTNTISSDITQIPLVYSFNLSGSTSVSGGFTGDIIRNVN 538
DB 478 SRVHPVYVSWTHSARTNTISSDITQIPLVYSFNLSGSTSVSGGFTGDIIRNVN 538
QY 537 NTLRAPYVSWTHSARTNTISSDITQIPLVYSFNLSGSTSVSGGFTGDIIRNVN 537
DB 537 NTLRAPYVSWTHSARTNTISSDITQIPLVYSFNLSGSTSVSGGFTGDIIRNVN 537
QY 539 GSVLSMGLNPNNTSLQRYRVRVRYAASQTMVLRVTYGSSTTDPQGPSTMSANESLTSQS 598
DB 539 GSVLSMGLNPNNTSLQRYRVRVRYAASQTMVLRVTYGSSTTDPQGPSTMSANESLTSQS 598
QY 598 FRFAEPVGISASGSOTAGISISNNAGROTHPHDKIEPIPIATPFAEYDLERAQEAVALF 658
DB 598 FRFAEPVGISASGSOTAGISISNNAGROTHPHDKIEPIPIATPFAEYDLERAQEAVALF 658
QY 658 LFTNTNPRRLKTDVTDYHIDQVSNLVACLSDEFCDEKRELEKVKYAKRLSDBRNLDOPN 718
DB 658 LFTNTNPRRLKTDVTDYHIDQVSNLVACLSDEFCDEKRELEKVKYAKRLSDBRNLDOPN 718
QY 718 PNTSINPKOPDPISTNEQSNFTSIHESQSHGWSGSENIITIQEGNDVFKENYVTLPGTENE 778
DB 718 PNTSINPKOPDPISTNEQSNFTSIHESQSHGWSGSENIITIQEGNDVFKENYVTLPGTENE 778
QY 778 CYPTLYYOKIGSEBELKAYTRYQURGYIEDSOLEIYLIRYNAKHETLDVPGTESVWPLSV 838
DB 778 CYPTLYYOKIGSEBELKAYTRYQURGYIEDSOLEIYLIRYNAKHETLDVPGTESVWPLSV 838
QY 838 ESDIGRCGEPRNCAPHFENWPDLDGSCRDGKCAHSHHSFLDIDIGCTDLHENLGWVWVFK 898
DB 838 ESDIGRCGEPRNCAPHFENWPDLDGSCRDGKCAHSHHSFLDIDIGCTDLHENLGWVWVFK 898
QY 898 FKIKTOEGHARLGNLEFIEKPLGEBALSRYRAEKKWDKREKQLQLETKRVYTEAKEAV 958
DB 898 FKIKTOEGHARLGNLEFIEKPLGEBALSRYRAEKKWDKREKQLQLETKRVYTEAKEAV 958
QY 958 DALFVDSQYNRLQADTNIGMHAADKLVHRIEAYLSELSVYPGVNAEJFEELEGRITTA 1018
DB 958 DALFVDSQYNRLQADTNIGMHAADKLVHRIEAYLSELSVYPGVNAEJFEELEGRITTA 1018

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Db 958 DAFVDSQVDRLOADNTNIGIHADKLVHRIREAYISELSVIGVNAELFEELLEGHITTA 1017
Qy 1019 ISLYDARNVKNQDFFNNGLA CMNVKGVHDVVOQSHRSVLVIPMEAEVSQA VVCPGRGY 1078
Db 1018 ISLYDARNVKNQDFFNNGLA CMNVKGVHDVVOQSHRSVLVIPMEAEVSQA VVCPGRGY 1077
Qy 1079 ILRVTAYKEGEGCVTIHIEINNTDELKFKNCEEEVYPTDGTCDNYTAHQGTAVCN 1138
Db 1078 ILRVTAYKEGEGCVTIHIEINNTDELKFKNCEEEVYPTDGTCDNYTAHQGTAVCN 1137
Qy 1139 RNAGYDAVEVDPTTASVNYKPYTEBEETDVRBDNCEYRGVYVNPPLPAGYMTKELEY 1198
Db 1138 RNAGYDAVEVDPTTASVNYKPYTEBEETDVRBDNCEYRGVYVNPPLPAGYMTKELEY 1197
Qy 1199 FPETDKWMIIEIGTEGKFIVDSYELLIMEE 1228
Db 1198 FPETDKWMIIEIGTEGKFIVDSYELLIMEE 1227

RESULT 4
US-10-926-819-8
; Sequence 8, Application US/10926819
; Publication No. US20050049410A1
; GENERAL INFORMATION:
; APPLICANT: Carozzi, Nadine
; APPLICANT: Harzigs, Tracy
; APPLICANT: Kozziel, Michael G.
; APPLICANT: Duck, Nicholas B.
; APPLICANT: Carr, Brian
; TITLE OF INVENTION: AXMT-003, A Delta-Endotoxin Gene and
; TITLE OF INVENTION: Methods for Its Use
; FILE REFERENCE: 045600/281577
; CURRENT APPLICATION NUMBER: US/10/926, 819
; CURRENT FILING DATE: 2004-08-26
; PRIOR APPLICATION NUMBER: 60/498, 518
; PRIOR FILING DATE: 2003-08-28
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 1228
; TYPE: PRF
; ORGANISM: *Bacillus thuringiensis serovar entomocidus*
US-10-926-819-8

Query Match 88.7%; Score 5745; DB 17; Length 1228;
Best Local Similarity 89.1%; Pred. No. 0;
Matches 1098; Conservative 35; Mismatches 90; Indels 10; Gaps 3;

Qy 1 LITSNRKNEEIIINALSIPAVSNHSTOMDLSPPARIEDSLCIAEGNNINPLVSASTVQTGI 60
Db 1 MTSNRKNEEIIIN----AVSNHSAQMDLLPDARIEDSLCIAEGNNIDPVSASTVQTGI 55
Qy 61 NINGRILGVGVPPAGQIAFYSGFLVGEIEMPRGDDWEIFLEHVEQILNOITENANNTA 120
Db 56 NINGRILGVGVPPAGQIAFYSGFLVGEIEMPRGDDWEIFLEHVEQILNOITENANNTA 115
Qy 121 LARLOGLGDSFRAVVOGLSEDMLENRDARTRSVLYTOYIALBELDFLAMPALFARNOEVP 180
Db 116 LARLOGLGDSFRAVVOGLSEDMLENRDARTRSVLYTOYIALBELDFLAMPALFARNOEVP 175
Qy 181 LLMVYAQAANLHLILLRDA SLFGSEFGLTSOEIORYYERQVDEQTRDYSYCVEMWNTGLN 240
Db 176 LLMVYAQAANLHLILLRDA SLFGSEFGLTSOEIORYYERQVDEQTRDYSYCVEMWNTGLN 235
Qy 241 SLGRTNAASVNRINQPFRRDLTGLVLDVVALPPSYDTFTYININSAQITREVTYDAICATG 300
Db 236 SLGRTNAASVNRINQPFRRDLTGLVLDVVALPPSYDTFTYININSAQITREVTYDAICATG 295
Qy 301 VMAASNMWYNNNAAPSFAIEFAVIRSPHLDFLEQLTIFSTSSWSATRYMTYWRGHTIQ 360
Db 296 VMAASNMWYNNNAAPSFAIEFAVIRSPHLDFLEQLTIFSTSSWSATRYMTYWRGHTIQ 355

Qy 361 SRPIGGGLNTSTHSGTNNTSINPVRLSFSPRDVYMTESYGVLLMGVLEPIHGVTVRFN 420
Db 356 SRPIGGGLNTSTHSGTNNTSINPVRLSFSPRDVYMTESYGVLLMGVLEPIHGVTVRFN 415
Qy 421 FRNPONTFERGTANYSQAPESPGLQKOBETELPEPTTERPNVYESYSHRLSHIGLSQSQR 480
Db 416 FRNPONTFERGTANYSQAPESPGLQKOBETELPEPTTERPNVYESYSHRLSHIGLSQSQR 475
Qy 481 VAVPVYSWTHRSADRTNTI SSDSITQIPLVKSFNLSGTSVYSGPGFTGDDIIRTVNGS 540
Db 476 VAVPVYSWTHRSADRTNTI GPNRITQIPMVKASLELQGTIVVRGPGFTGDDIIRTVNGS 535
Qy 541 VLSMGLNFNTSLQRRVAVRYAASQTMVLAATVGGSTTFDQGPSTMSANESLTSQSFR 600
Db 536 FGPRIYTVAGPLTQRRIRISPRYASTVD FPFVSRGGITVNNFRFLRTMSGDLKGNFY 595
Qy 601 FAFBPVIGSASGQ--TAGISISNNAQRQTFHPDKIEFITYTFAEAYDLERAQBAVNAL 659
Db 596 RAFTTPTFTFQIQDIRSISQGLSGNGEVYIDKIEIIPVTATFEAYDLERAQBAVNAL 655
Qy 660 FTNTNPRRLKTDVTDYHIDQVSNLVACLSDEFCLDEKRELLKVKYAKLSDERNLLODP 719
Db 656 FTNTNPRRLKTDVTDYHIDQVSNLVACLSDEFCLDEKRELLKVKYAKLSDERNLLODP 715
Qy 720 NFPSINKQDPFTSTNQSNTSIHESSEHGMWSEMITTOEGNDVKEKNVYTLPGTFNQC 779
Db 716 NFPSINKQDPFTSTNQSNTSIHESSEHGMWSEMITTOEGNDVKEKNVYTLPGTFNQC 775
Qy 780 YPTLYOKIGESSELKAYTRYQLRGYEDSQDLEIYIRYNAKHETLDVPGTESWMPLSVE 839
Db 776 YPTLYOKIGESSELKAYTRYQLRGYEDSQDLEIYIRYNAKHETLDVPGTESWMPLSVE 835
Qy 840 SPIRGCEBNRCAHPHEWNPDLDCSCRDGEKCAHSHFSLDIDICTDLHENLGVWVVF 899
Db 836 SPIRGCEBNRCAHPHEWNPDLDCSCRDGEKCAHSHFSLDIDICTDLHENLGVWVVF 895
Qy 900 KITQOGHARLGNLEFIEEKPLLEGEALSRVKAEEKWRKREKLOLETRYVYEAKEAYD 959
Db 896 KITQOGHARLGNLEFIEEKPLLEGEALSRVKAEEKWRKREKLOLETRYVYEAKEAYD 955
Qy 960 ALFVDSQVNRLOADNTNIGIHADKLVHRIREAYISELSVIPGVNAIEFEELLEGHITTAI 1019
Db 956 ALFVDSQVNRLOADNTNIGIHADKLVHRIREAYISELSVIPGVNAIEFEELLEGHITTAI 1015
Qy 1020 SLYDARNVKNQDFFNNGLA CMNVKGVHDVVOQSHRSVLVIPMEAEVSQA VVCPGRGY 1079
Db 1016 SLYDARNVKNQDFFNNGLA CMNVKGVHDVVOQSHRSVLVIPMEAEVSQA VVCPGRGY 1075
Qy 1080 LRYTAYKEGEGCVTIHIEINNTDELKFKNCEEEVYPTDGTCDNYTAHQGTAVCN 1138
Db 1076 LRYTAYKEGEGCVTIHIEINNTDELKFKNCEEEVYPTDGTCDNYTAHQGTAVCN 1135
Qy 1136 CNSRNAGYDAVEVDPTTASVNYKPYTEBEETDVRBDNCEYRGVYVNPPLPAGYMTKE 1195
Db 1136 CNSRNAGYDAVEVDPTTASVNYKPYTEBEETDVRBDNCEYRGVYVNPPLPAGYMTKE 1195
Qy 1196 LBYFPETDKWMIIEIGTEGKFIVDSYELLIMEE 1228
Db 1196 LBYFPETDKWMIIEIGTEGKFIVDSYELLIMEE 1228

RESULT 5
US-10-809-953-10
; Sequence 10, Application US/10809953
; Publication No. US2004018125A1
; GENERAL INFORMATION:
; APPLICANT: Van Mellaert, Herman
; APPLICANT: Botterman, Johan
; APPLICANT: Van Rie, Jeroen
; APPLICANT: Joos, Henk
; TITLE OF INVENTION: RECOMBINANT PLANT EXPRESSING NON-COMPETITIVELY BINDING Bc INSECTIC
; FILE REFERENCE: 021565-078

```

CURRENT APPLICATION NUMBER: US/10/809,953
CURRENT FILING DATE: 2004-03-26
PRIOR APPLICATION NUMBER: US/09/661,016
PRIOR FILING DATE: 2000-09-13
PRIOR APPLICATION NUMBER: PCT/EP90/00905
PRIOR FILING DATE: 1990-05-30
PRIOR APPLICATION NUMBER: GB 89401499.2
PRIOR FILING DATE: 1989-05-31
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patent in Ver. 2.0
SEQ ID NO 10
LENGTH: 1228
TYPE: PRT
ORGANISM: Bacillus thuringiensis
US-10-809-953-10

Query Match      88.6%; Score 5742; DB 16; Length 1228;
Best Local Similarity 89.1%; Pred. No. 0;
Matches 1098; Conservative 35; Mismatches 90; Indels 10; Gaps 3;

QY 1 LTNRRKNEEIIINALSIPAVSNHSTONDLSPDARIEDSLCIABGNINPLVASTVGTGI 60
DB 1 LTNRRKNEEIIIN-----AVSNHSAQMDLLPDARIEDSLCIABGNINPLVASTVGTGI 55
QY 61 NINGRIIGVGVPPAGQIASFYSFLVGEMLPRGDDQWEIFLEHYEQILNQITENANNTA 120
DB 56 NINGRIIGVGVPPAGQIASFYSFLVGEMLPRGDDQWEIFLEHYEQILNQITENANNTA 115
QY 121 LARLOGGDSFRAVQOGLSEDMLENRDAPTRSVLYTQYIALEIDFLNAMPFLIRNOEVP 180
DB 116 LARLOGGDSFRAVQOGLSEDMLENRDAPTRSVLYTQYIALEIDFLNAMPFLIRNOEVP 175
QY 181 LLMVYAQANLHLILLDASLFGSEFGLTSQEIQRVYEROVEOTRDYSDYCEVWYNTGLN 240
DB 176 LLMVYAQANLHLILLDASLFGSEFGLTSQEIQRVYEROVEOTRDYSDYCEVWYNTGLN 235
QY 241 SLRGTAASVRYNORRDLTLGLVDLVALPESYDTRTYPTINTSAQITREVTDAIGATG 300
DB 236 SLRGTAASVRYNORRDLTLGLVDLVALPESYDTRTYPTINTSAQITREVTDAIGATG 295
QY 301 VNMAANWNNNAPSFSAIETAVIRSPHLLDPLEQLTPESSRMSATRHMTWRGHTIQ 360
DB 296 VNMAANWNNNAPSFSAIETAVIRSPHLLDPLEQLTPESSRMSATRHMTWRGHTIQ 355
QY 361 SRPIGGLNTSTHSTNTSINPRLSFFSHDYWTESYAGVLLMGIYLPYHGVPTAFRN 420
DB 356 SRPIGGLNTSTHSTNTSINPRLSFFSHDYWTESYAGVLLMGIYLPYHGVPTAFRN 415
QY 421 FNNPONTFERGTANYGQYSPGLQDKDSETELPETTERPNYESYSHRLSHIGLISQSR 480
DB 416 FNNPONTFERGTANYGQYSPGLQDKDSETELPETTERPNYESYSHRLSHIGLISQSR 475
QY 481 VHVYVSWTHRSADRNNTSSDSITQPLVKSFNLSGTVSGPRTGDDIIRTNVNGS 540
DB 476 VHVYVSWTHRSADRNNTSSDSITQPLVKSFNLSGTVSGPRTGDDIIRTNVNGS 535
QY 541 VLSMGLFNNTSLQRYRVRVRYAASQTMVLRVTYVSGSTTFDQGFPSMTANESLTSQSR 600
DB 536 FGPRTVYNGPLQRRRIGRGRVASTYDPDFVSRGCTTVNNRFLRTMSGDELKGNFV 595
QY 601 PAFEPVIGISASGQ-TAGISISNNAQRQTFHFKIEFIPITATFEAYDLERAQEAVAL 659
DB 596 RRAFTTPTFTQODIIRTSIQGLSGNGEYIKIEIIPVATFPAEAYDLERAQEAVAL 655
QY 660 FNTNPRRLKTDVTDVHIQOVSVLVACLSDFCLDERKELLEYKAKRLSDERNLLQDP 719
DB 656 FNTNPRRLKTDVTDVHIQOVSVLVACLSDFCLDERKELLEYKAKRLSDERNLLQDP 715
QY 720 NPTSINKQDPFISTNQSNTSIHQSEHGMGSENITIOGNDVPEKENVTLPGTFNEC 779
DB 716 NPTSINKQDPFISTNQSNTSIHQSEHGMGSENITIOGNDVPEKENVTLPGTFNEC 775
QY 780 YPTLYYKIGESBELKATRYQLRGYIEDSQDLEIYLIRYNAKHETLDVPGTESLWPLSV 839

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DB 776 YPTLYYKIGESBELKATRYQLRGYIEDSQDLEIYLIRYNAKHETLDVPGTESLWPLSV 835
QY 840 SPIGRCEPNRCAHPFENPBDLDCSCRDGKCAHSHHFSIDIDIGCTDLHENTGVWVF 899
DB 836 SPIGRCEPNRCAHPFENPBDLDCSCRDGKCAHSHHFSIDIDIGCTDLHENTGVWVF 895
QY 900 KIKTOEGHARLGNLEFIEEKPRLGELASRYRAEKRRDRERQLETKRYTEAKEAVD 959
DB 896 KIKTOEGHARLGNLEFIEEKPRLGELASRYRAEKRRDRERQLETKRYTEAKEAVD 955
QY 960 ALPFDQYNRLQADTNIGTHAADKLVHRIRREAYLSLSITPGVNAIFELBERITTAI 1019
DB 956 ALPFDQYNRLQADTNIGTHAADKLVHRIRREAYLSLSITPGVNAIFELBERITTAI 1015
QY 1020 SLVDARVYVNGGFNNGLACMNVKGYDVQOSSHRSVLYVPEMBAVSQAVRVCGRGYI 1079
DB 1016 SLVDARVYVNGGFNNGLACMNVKGYDVQOSSHRSVLYVPEMBAVSQAVRVCGRGYI 1075
QY 1080 LRYTAYKEGYGEGCVTIHEIENNTDELKFNKCEEEVYPTDGTGNDYTAHQTA---V 1135
DB 1076 LRYTAYKEGYGEGCVTIHEIENNTDELKFNKCEEEVYPTDGTGNDYTAHQTAHQTA 1135
QY 1136 CNSRNAGYEDAYEVDTTASVNYKPYTEBEYTTVRRDNHCERYNYPPLPAGYTK 1195
DB 1136 CNSRNAGYEDAYEVDTTASVNYKPYTEBEYTTVRRDNHCERYNYPPLPAGYTK 1195
QY 1196 LEYFETDKWIEIGETGKFIYDSVELLME 1228
DB 1196 LEYFETDKWIEIGETGKFIYDSVELLME 1228

```

RESULT 6

US-09-988-462-7

Sequence 7, Application US/09988462

Publication No. US20030046726A1

GENERAL INFORMATION:

APPLICANT: Kozziel, Michael G.

Desai, Najini M.

Lewis, Kelly S.

Kramer, Vance C.

Warren, Gregory W.

Evola, Stephen V.

Crossland, Lyle D.

Wright, Martha S.

Merlin, Ellis J.

Lauris, Karen L.

TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED

INSECTICIDAL ACTIVITY IN MAIZE

NUMBER OF SEQUENCES: 94

CORRESPONDENCE ADDRESS:

ADDRESSER: Syngenta Biotechnology, Inc.

STREET: 3054 Cornwalis Road

CITY: Research Triangle Park

STATE: NC

COUNTRY: USA

ZIP: 27709

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/988,462

FILING DATE: 20-No. US20030046726A1-2001

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/547,422

FILING DATE: 11-Apr-2000

APPLICATION NUMBER: US 08/459,504

FILING DATE: 02-JUN-1995

APPLICATION NUMBER: US 07/951,715

FILING DATE: 25-SEP-1992

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APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Mel99, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-188051
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-988-462-7

Query Match      87.4%; Score 5659.5; DB 10; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MDLSPARIEDSCIRAGNNINPLVSASTVQTGTINIGRIIGVLPAGQIASFYSFLV 86
DB 1 MDLPPARIEDSCIRAGNNIDPFVASTVQTGTINIGRIIGVLPAGQIASFYSFLV 60
QY 87 GELMPGRDQWEI FLEHVEQLINQOITENARNTALALQGLGDSFRAYQOSLEDWLENRD 146
DB 61 GELMPGRDQWEI FLEHVEQLINQOITENARNTALALQGLGDSFRAYQOSLEDWLENRD 120
QY 147 DARTSVLYTQYIALBELDFLNAMPFLAIRNOEVPILMNVYQAAVHLLLRDLSLGSEF 206
DB 121 DARTSVLYTQYIALBELDFLNAMPFLAIRNOEVPILMNVYQAAVHLLLRDLSLGSEF 180
QY 207 GLTSOEIORYERQVEGTRDYSYCYEWNTGNSLRGTAAAGWVRNOFRDULTCGLVD 266
DB 181 GLTSOEIORYERQVEGTRDYSYCYEWNTGNSLRGTAAAGWVRNOFRDULTCGLVD 240
QY 267 LVALLPSPYDRTYPINTSAQLTREVTDAIGATGVNNAAMWYNNNAFPSALETAVIRS 326
DB 241 LVALLPSPYDRTYPINTSAQLTREVTDAIGATGVNNAAMWYNNNAFPSALETAVIRS 300
QY 327 PHLLDFLEQLTITSTSRKATRMTRYWRGHTTIOSTRIGGLNTSTHGSTNTSINPRLS 386
DB 301 PHLLDFLEQLTITSTSRKATRMTRYWRGHTTIOSTRIGGLNTSTHGSTNTSINPRLS 360
QY 387 FFSRDVYMTSVYAGVLLMGTYLEPIHGVPTVRFNFRPONTPEFGTANYGQPFESPQLQ 446
DB 361 FFSRDVYMTSVYAGVLLMGTYLEPIHGVPTVRFNFRPONTPEFGTANYGQPFESPQLQ 420
QY 447 KDSETELPETTERPNYESYSHRLSHIGLSQSRHVVPVSWTHRSADRNTTSSDSITQ 506
DB 421 KDSETELPETTERPNYESYSHRLSHIGLSQSRHVVPVSWTHRSADRNTTSSDSITQ 480
QY 507 IPLVKSEFNLSGTVSGPGFTGGDIIRTVNGSVLSMGLNFNNTSLQRRVRRVRYASQ 566
DB 481 IPLVKASELQGTIVVAGPGFTGGDIIRTVNGSGFGPIRTVVGPLTQRRVRIGRYASTV 540
QY 567 TMTLRYVVGSGTTFDQGFSTMSANESLTQSFPFAFPVGISASGSO- TAGSISNNAG 625
DB 541 DDPFVFSRGGTNNFRFLRTMNSGDELKYGNFRRAPFTPTFTQIDIIKRTSIQGLSG 600
QY 626 RQTFHFDKIEFIPITATFEAYDLERAQEAVALFTNTNPRRLKTDVTDVHIQVSNLVA 685
DB 601 NGEVYIDKIEIIPITATFEAYDLERAQEAVALFTNTNPRRLKTDVTDVHIQVSNLVA 660
QY 686 CLSDEFCLEDERRELEKVKYAKRLSDERNLIDQNFNTSINKQDPFISTNEQSNFTSIHQ 745
DB 661 CLSDEFCLEDERRELEKVKYAKRLSDERNLIDQNFNTSINKQDPFISTNEQSNFTSIHQ 720
QY 746 SEHGWMGSENITTOEGNDVFKENVYTLPGTFNNECYPTYLQKIGESLKAATRYQLKGYI 805
DB 721 SEHGWMGSENITTOEGNDVFKENVYTLPGTFNNECYPTYLQKIGESLKAATRYQLKGYI 780

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QY 806 EDSODLEIYLIRYNAKHETLDVPGTESVWPLSVESPIGRCGEPNRCAPHEWNPDLDCSC 865
DB 781 EDSODLEIYLIRYNAKHETLDVPGTESLWPLSVESPIGRCGEPNRCAPHEWNPDLDCSC 840
QY 866 RQGEKCAHSHHPSLDDIDGCTDLHENLGVWVVFYKIQTEGHARLGNLFIEBKPLLGEA 925
DB 841 RQGEKCAHSHHPSLDDIDGCTDLHENLGVWVVFYKIQTEGHARLGNLFIEBKPLLGEA 900
QY 926 LSRVKAERKWDKREKQLQETKRYVTEAKEAVDALFVDSQYNRLOADTNIGMHAADKL 985
DB 901 LSRVKAERKWDKREKQLQETKRYVTEAKEAVDALFVDSQYNRLOADTNIGMHAADKL 960
QY 986 VHRIRAYISELPIVPGVAAEIPFELBGRITLALSYDARNVYKNDPNNGLACMNVKGH 1045
DB 961 VHRIRAYISELPIVPGVAAEIPFELBGRITLALSYDARNVYKNDPNNGLACMNVKGH 1020
QY 1046 VDVQOSHHRSVYIPEWBAVSQAVVCPGRGYILKVTAYKEGEGCVTTHIEENNTDE 1105
DB 1021 VDVQOSHHRSVYIPEWBAVSQAVVCPGRGYILKVTAYKEGEGCVTTHIEENNTDE 1080
QY 1106 LKFKNCEBEVYPTDGTGNDYTAHQGT-----VCNSRNAGYEDAYEVDTTASVNYKPY 1161
DB 1081 LKFKNCEBEVYPTDGTGNDYTAHQGTACADACNSRNAGYEDAYEVDTTASVNYKPY 1140
QY 1162 EBEYTTVDVRDNKCEYDRGVNYPPLPAGYMTKELEYFPETDKWYIEIGTEBKFTYDSV 1221
DB 1141 EBEYTTVDVRDNKCEYDRGVNYPPLPAGYMTKELEYFPETDKWYIEIGTEBKFTYDSV 1200
QY 1222 ELLLMEE 1228
DB 1201 ELLLMEE 1207

RESULT 7
US-09-826-660-23
; Sequence 23, Application US/09826660
; Patent No. US20010026940A1
; GENERAL INFORMATION:
; APPLICANT: Cardneau, Guy A.
; APPLICANT: Steلمان, Steven J.
; APPLICANT: Narva, Kenneth E.
; TITLE OF INVENTION: Plant-Optimized Genes Encoding Peestcidal Toxins
; FILE REFERENCE: MA-714XC2D1
; CURRENT APPLICATION NUMBER: US/09/826,660
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/178,252
; PRIOR FILING DATE: 1998-10-23
; PRIOR APPLICATION NUMBER: 60/065,215
; PRIOR FILING DATE: 1997-11-12
; PRIOR APPLICATION NUMBER: 60/076,445
; PRIOR FILING DATE: 1998-03-02
; NUMBER OF SEQ ID NOS: 27
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1186
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Toxin encoded by synthetic B.c. gene
; US-09-826-660-23

Query Match      78.8%; Score 5108; DB 9; Length 1186;
Best Local Similarity 80.6%; Pred. No. 0;
Matches 995; Conservative 76; Mismatches 108; Indels 56; Gaps 8;

QY 1 LTRNKKNEEINIALSIPAVSNHSTQMDLSPDARIDSLCIAAGNNINPLVSASTVQTGTI 60
DB 1 MTSNRKNEEINIALSIPAVSNHSAQMDLSTDAKIDSLCIAAGNNIDPFVASTVQTGTI 60
QY 61 NIGRIIGVGVFPAGQIASFYSFLVGEIIMPGRDQWEI FLEHVEQLINQOITENARNTA 120
DB 61 NIGRIIGVGVFPAGQIASFYSFLVGEIIMPGRDQWEI FLEHVEQLINQOITENARNTA 120

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QY 121 LAALQIGDSFRAYQOSLEDMLENRDDARTRSVLTYOIALLEDFLNAMEPLFAIRNOQVP 180
DB 121 LAALQIGDSFRAYQOSLEDMLENRDDARTRSVLTYOIALLEDFLNAMEPLFAIRNOQVP 180
QY 181 LLMVYQAAHLHLRLDASLFGSEFGLTSQEOIRYERQVEQCRDSDYCVENYNTGLN 240
DB 181 LLMVYQAAHLHLRLDASLFGSEFGLTSQEOIRYERQVEQCRDSDYCVENYNTGLN 240
QY 241 SLRGTAASVVRVYQOPRDLTLGLDLVALFPSTYDTRYPINTSAQLTREYTDAGATG 300
DB 241 SLRGTAASVVRVYQOPRDLTLGLDLVALFPSTYDTRYPINTSAQLTREYTDAGATG 300
QY 301 V--NMASMNYYNNNAPSAIETAVIRSPHLLDLEQLTISTSSKMSATRHMTYRGHT 358
DB 301 APGSPASTMFWNNAPSAIETAVIRSPHLLDLEQLTISTSSKMSATRHMTYRGHT 358
QY 359 IQSRPFGGGLANTSTHGSTNTSINPVLSFSPSRDYWTESYAGVLMGITYLEPHGVPTVR 418
DB 359 IQSRPFGGGLANTSTHGSTNTSINPVLSFSPSRDYWTESYAGVLMGITYLEPHGVPTVR 418
QY 419 FNRFRONTFERGTAANSOPYESPGLOKQSETELPEPETERPVYESHRLSHIGLSIQ 478
DB 419 FNRFRONTFERGTAANSOPYESPGLOKQSETELPEPETERPVYESHRLSHIGLSIQ 478
QY 478 NTLRAPIYSWTHRSADRTNTISSDSITQIPLVKSFNLSGTSVSGPFTGDIIRTNVN 538
DB 478 NTLRAPIYSWTHRSADRTNTISSDSITQIPLVKSFNLSGTSVSGPFTGDIIRTNVN 538
QY 539 GSIVLSGMLNNTSLQRYRVRYVYASQTMVLAATVGGSTTFPOGFPSTMSANESLTSQS 558
DB 539 GSIVLSGMLNNTSLQRYRVRYVYASQTMVLAATVGGSTTFPOGFPSTMSANESLTSQS 558
QY 559 PREAPFVGISASGSOTAGISISNNAGROTFHFDPKLEPITATFEKRYVLEBAQEA 658
DB 559 PREAPFVGISASGSOTAGISISNNAGROTFHFDPKLEPITATFEKRYVLEBAQEA 658
QY 659 LFTNTPRRLKTDVTYHIDVQNLVACLSDEFCLDEKRELEKVKYAKRLSDERNLLOD 718
DB 659 LFTNTPRRLKTDVTYHIDVQNLVACLSDEFCLDEKRELEKVKYAKRLSDERNLLOD 718
QY 719 PNTSINKQDPFISTEQSNFTSIHEQSEHGMMGSENITIQEGNDVFKENYVTLPGTFNE 778
DB 719 PNTSINKQDPFISTEQSNFTSIHEQSEHGMMGSENITIQEGNDVFKENYVTLPGTFNE 778
QY 779 CPTTYLYOKIGSESELKAYTRYOLRGYIEDSODLEYILIRYNAKHETLDVGTGSWPLSV 838
DB 779 CPTTYLYOKIGSESELKAYTRYOLRGYIEDSODLEYILIRYNAKHETLDVGTGSWPLSV 838
QY 839 ESPFGRGCEBNRCAPHEWNPDLDCSCRDGECALHSHHPSLDIDIGCTDLHENLGVWV 898
DB 839 ESPFGRGCEBNRCAPHEWNPDLDCSCRDGECALHSHHPSLDIDIGCTDLHENLGVWV 898
QY 899 FKIKTOEGHARLGNLEPIEBKPLLEALSHVKAEEKMRDKREKOLETRKRYVTEAKEAV 958
DB 899 FKIKTOEGHARLGNLEPIEBKPLLEALSHVKAEEKMRDKREKOLETRKRYVTEAKEAV 958
QY 959 DALFVUSQVNRLOADPNIGMIHAADLVYRIRARAYISELSVTPGNAATIEEBEGRIITA 1018
DB 959 DALFVUSQVNRLOADPNIGMIHAADLVYRIRARAYISELSVTPGNAATIEEBEGRIITA 1018
QY 1019 ISLYDARVYVKNQDFFNNGLACNVYKGVHDV--QOSHRSVVLVPEWEABVSQAVRCPGRG 1077
DB 1019 ISLYDARVYVKNQDFFNNGLACNVYKGVHDV--QOSHRSVVLVPEWEABVSQAVRCPGRG 1077
QY 1078 YILRVATAYEGEGCVTTHIEENNTDELKFKNCSEBEVYPTDGTGNDYTA---HQGT 1133
DB 1078 YILRVATAYEGEGCVTTHIEENNTDELKFKNCSEBEVYPTDGTGNDYTA---HQGT 1133
QY 1134 AVGNSSNAGVEDAYEVDTTASVVKPYTEBEYTYDVRDNHCYDYGVMYPPPLPAGYMT 1193
DB 1134 AVGNSSNAGVEDAYEVDTTASVVKPYTEBEYTYDVRDNHCYDYGVMYPPPLPAGYMT 1193
QY 1194 --YTSNRNGIDGAYESNSVPAVYASAYEBKAYTDGDRDNPCESSNRGQGYDTPLPAGYVT 1151
DB 1194 --YTSNRNGIDGAYESNSVPAVYASAYEBKAYTDGDRDNPCESSNRGQGYDTPLPAGYVT 1151

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QY 1194 KELEYPETDKWIEIGETEGKPIVDSVELLMEE 1228
DB 1152 KELEYPETDKWIEIGETEGTPIVDSVELLMEE 1186

RESULT 8
US-09-972-175-59
; Sequence 59, Application US/09972175
; Publication No. US20030101482A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
;           Gilmer, Amy Jelen
;           Mettus, Anne-Marie Light
; TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING
;                     LEPIDOPTERAN-ACTIVE-DELTA-ENDOTOXINS
; NUMBER OF SEQUENCES: 76
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston
; STATE: Texas
; COUNTRY: USA
; ZIP: 77210
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/972,175
; FILING DATE: 05-Oct-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/337,635
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Kitchell, Barbara S.
; REGISTRATION NUMBER: 33,928
; REFERENCE/DOCKET NUMBER: MECO:206
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 512/418-3000
; TELEFAX: 512/474-7577
; INFORMATION FOR SEQ ID NO: 59:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1189 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULAR TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 59:
US-09-972-175-59

Query Match 54.1%; Score 3502.5; DB 10; Length 1189;
Best Local Similarity 57.0%; Pred. No. 2e-259;
Matches 717; Conservative 143; Mismatches 289; Indels 109; Gaps 20;

QY 7 NENEII--NALSTPANSNSTQWDLSPDARIIBSLCIAGSNMNPVLSASTVGTGINIAG 64
DB 5 NQMOQIPNCLSD-----NPEVYLDGERISTGN-----SSIDISLVO 43
QY 65 RIVGLVGFAGQIASFSFLVGLWELMPRGQWEIFLEHVEQLINQOITENANNTALRL 124
DB 44 FLVSNR-VFGGFLVLGLIPFWGIVP---SQMDATLVQIEQLINRIAPFANMAIANL 99
QY 125 QGIGDSFRAYQOSLEDMLENRDDARTRSVLTYOIALLEDFLNAMEPLFAIRNOQVP 184
DB 100 EGLGNFNIVYEAFAKMEBEDPNNPATRTVIRFRILDLGLERDIPSAISGFEVPLSV 159
QY 185 YQAAHLHLRLDASLFGSEFGLTSQEOIRYERQVEQCRDSDYCVENYNTGLSLRG 244
DB 160 YQAAHLHLRLDASLFGSEFGLTSQEOIRYERQVEQCRDSDYCVENYNTGLSLRG 219
QY 245 TNAASVVRVYQOPRDLTLGLDLVALFPSTYDTRYPINTSAQLTREYTDAGATG 304
DB 245 TNAASVVRVYQOPRDLTLGLDLVALFPSTYDTRYPINTSAQLTREYTDAGATG 304

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RESULT 9
US-10-200-522-59
; Sequence 59, Application US/102005222
; Publication No. US2003019536A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.

	Query Match	54.1%;	Score 3502.5;	DB 14;	Length 1189;
	Best Local Similarity	57.04%;	Pred. No. 2e-259;		
	Matches 717;	Conservative 143;	Mismatches 289;	Indels 109;	Gaps 20
QY	7	NENEII--NALISPAVSNHSTOMDLSPDARIEDSLICLAEGNNINPLVASATVQTGINAG	64		
Db	5	NQNCICFYNCIS-----NPEEVLIDDERISTGN-----SSIDISLTVQ	43		
QY	65	RIILDLVGPAGOLASFSFLVGEIIMPEGRDOWEFLIEHBOLINQOITENARNTALRL	124		
Db	44	FLVSNF--VPGGGFLVGLIDFWGTVGP---SQMDAFLVQIQLINERLAEPRAAIAIAL	99		
QY	125	QGLDSDSPRAYQOOSLEDMLENRDARTSVLYTQYIALELDFLAMPALPAINQVEYPLMV	184		
Db	100	EGLGNFNFIYEAPEKMEDEPNNPATRRVIDRFRIIDGLERDIPSPALISGFEVPLLSV	159		
QY	185	YAOAAANLHLLRLDASLPGSEFGITSGIOIKYERQVQOTDSDPYCYEBMYNTGNSLRG	244		
Db	160	YAOAAANLHLLRLDSVIFGERWGLTTINVENYNLHHIDYADHCANTYRGLNLLPA	219		
QY	245	TNAAWRYNQPFRBDLTGLVDLVALPFSYDTRTPYINTSAQLTREYVYDAIGATGVNMA	304		
Db	220	STYQDMITTYRLKRDILTIVDIAAFPNYNRRPIQPVGQLREYVTDPL----INEN	275		
QY	305	SMANNYNNAAPSFSALETAVIRSPHLLDFLEOLITPSTSSRNASATRHMTYMRGHTIQSRPI	364		
Db	276	POLQSVAPQLPFENWMESSAIRNPHFLDILANMLITFTD--WFSVGRNPFMGCHRIYSPL	332		
QY	365	GGGINTSHGSTNTNSINPVLSPFSRDVYMTESYAGVLL---WGIYLEPIHGVPYVRPN	420		
Db	333	GGGINTSEIYERKANQEPFRSFTFNGPFRILSNPTLLLOQPWAPFNNLAGVEYERS	392		
QY	421	FRNPQNTFE--RGTANYQPEYBPGQLKQSETELPEPETERPNYESYSHRLSHIGLIS	477		
Db	393	--TPTNSPTYGRGTV-----DSLTELPEPDNSVPREGYSHRLCHATFYQ	436		
QY	478	QSRVHV---PYGSMTHRSADRTNTISSDSITQPLVNSFMNLSGTSVVSGGFGFGDII	533		
Db	437	RSGETPFLTYGVVFSWTHRSATLTLNTIDERNIQPLVXGPRWGGTSVYTGSGFGTGGDIL	496		
QY	534	RTNNGVSLXSGILFNNTSLQRYRVRVYVYASQ-----TWVLVTVVGGSTTFPGGSPS	586		
Db	497	RRNTFGDVSILQVWINSPIQRYRLRFPYASSRDRARVLTGCAASTVGCGQVSNMPLQK	556		
QY	587	TMSANESITSGSPFAEPF-----VGISASGQTAGISISNNAQROTFFHDKIE	635		
Db	557	TMEIGENTLSRTFRYDTSNPFSPFRANDIIGISQPLFGAG--SISG---ELYIDKIE	611		
QY	636	FPIPTATEABYDLERAOEAVNALPTNNPRLKTDVMDYHIDQVSNLVACLSDFECLBE	695		

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Db 612 IILADATFEASDLERAQKAVNALFTSSNQLGKTDTVDYHIDOVSNLVDCLSEFLCLDE 671
Qy 696 KRELLEKVKYAKRLSDERNLLQDPNFTSINKQDPFISTNEQSNFTSIHQSEHGMCSEN 755
Db 672 KRELSEKVKAKRLSDERNLLQDPNFRGINRQDP-----RQMGRSTD 713
Qy 756 ITIOEGNDVFKENYVTLPGTFNECYPTLYLQKIGESLAKAYTRQYLGITEDSODLEIYL 815
Db 714 ITIOGGDVKENYVTLPGTVDECYPTLYLQKIDESLAKAYTRYLGLYEDSODLEIYL 773
Qy 816 IRYNAKHETLDVPGTESVWPLSVESPIGRGCEPNRCAPHFEMNDLDCGRDCEKCAHNS 875
Db 774 IRNNAHGEIYNVGTSLMPLSASPIGKCEPNRCAPHLEMPDLDCGRDCEKCAHNS 833
Qy 876 HHESLDIGCTDLHENTLGVVVFVKITQEGHARLGNLEFIEEKPILGALSRYKAEKK 935
Db 834 HHETLDIVGCTDLNEDLGWVVFVKITQEGHARLGNLEFIEEKPILGALSRYKAEKK 893
Qy 936 WRDKREKLOETGRVYTEAKEAVDALFVDSQYRNLQADVTNIGMTHADKLVHRIREAYLS 995
Db 894 WRDKREKLOETNIVYKEAKESVDALFVNSQYRNLQADVTNIGMTHADKLVHRIREAYLP 953
Qy 996 ELSEVIFGVNAEIPFEELEGRITITASLYDARNVYNGDPFNNGLACMNYKGVHYV-QQSHR 1054
Db 954 ELSEVIFGVNAEIPFEELEGRITITASLYDARNVYNGDPFNNGLACMNYKGVHYVDEQNNHR 1013
Qy 1055 SYLVIFEMBEAVSOAVRCPGRGIIYLVAYKESYGEQCTYIHEINNTDELKFNCEEE 1114
Db 1014 SYLVIFEMBEAVEQVAVRCPGRGIIYLVAYKESYGEQCTYIHEINNTDELKFNCEVEE 1073
Qy 1115 EYVPTGTGNDYTA---HOGTAVCNRRAGIEDAVEVDTTASVNYKPYEEETTYDVR 1170
Db 1074 EYVFNNTVVCNNYTGQOEVEGT--YTSRNOGYDEAGNPNPVPADYASVYEEKSYDGR 1131
Qy 1171 RDHCEYGVYVYPPPLPAGYMTKELEYEPETDKWMEIGETGKPIVDSVELLIMEE 1228
Db 1132 RKNPESNKGDTPLPAGYVTKDLLEYEPETDKWMEIGETGKPIVDSVELLIMEE 1189

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RESULT 10

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US-09-972-175-2
Sequence 2, Application US/09972175
Publication No. US20030101482A1
GENERAL INFORMATION:
APPLICANT: Baum, James A.
            Gilmer, Amy Jelen
            Mettus, Anne-Marie Light
TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING
                    LEPIDOPTERAN-ACTIVE-DELTA-ENDOTOXINS
NUMBER OF SEQUENCES: 76
CORRESPONDENCE ADDRESS:
ADDRESSER: Arnold, White & Durkee
STREET: P.O. Box 4433
CITY: Houston
STATE: Texas
COUNTRY: USA
ZIP: 77210
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/972,175
FILING DATE: 05-Oct-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/337,635
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Kitchell, Barbara S.
REGISTRATION NUMBER: 33,928
REFERENCE/DOCKET NUMBER: MECO:206

```

```

TELECOMMUNICATION INFORMATION:
TELEPHONE: 512/418-3000
TELEFAX: 512/474-7577
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1189 amino acids
TYPE: amino acid
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-972-175-2

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Query Match 54.0%; Score 3500.5; DB 10; Length 1189;
Best Local Similarity 57.0%; Pred. No. 2.8e-259;
Matches 717; Conservative 143; Mismatches 289; Indels 109; Gaps 20;

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Qy 7 NENEII--NALSTIPVNSHSTQMDLSDAIIEISLCAIEBNINPLVSAITVQGINIAG 64
Db 5 NQOCIFPNCLIS-----NPEVLLDGERISTGN-----SSIDISLSLVQ 43
Qy 65 RIIGVLGVPPAGQIASFYSFLVGLMPPGRDWEIFLEHYEQILNQITENARTALART 124
Db 44 ELVSNF-VPGCGFLVGLIDFWGIVGP---SQMDAPLVQIEQLINERIAFARAALANT 99
Qy 125 QGLGDSFRAYQGLDMLNENRDARTSVLYTOYIALEDFLNAAMPLFAIRNOEVLMMV 184
Db 100 EGLGNFNIVYEAFAKEBEDPNPAPFATRVVIDFRILDGLERDIPFAISGEFVPLSV 159
Qy 185 YQAANLHLLLDASLFGSEBGLTSGEIQRYTEROVEQTRDYSDEVEMVNTGANSLRG 244
Db 160 YQAANLHLLLDASVIFGERMGLYITINVENNRLRIHIDEADHCAANTYNGNLNLPK 219
Qy 245 TNAASWRYNQPRDITLGLDLVALFPSTYRTYPTINTSAQITREYTDATGATGVNMA 304
Db 220 STYQDITTKRLRLDITLTYDLAAPPENDARKRPIQPVQLTREYVTPPL-----INFN 275
Qy 305 SMMWYNNAPSFSALETAIVASPHLLDFLEQLTIFSTSSWSATRHMTYWRGHTIOSRPT 364
Db 276 POLQSAVQLEPTFVNMESSAIRNPHLFDILNNTLITFD---WFSVGRNPFYWGHRVSSLI 332
Qy 365 GGLANTSTGSTNTSINPRLSPFSRDYVTESYAGVL---WGYLEIRHGYPTVRN 420
Db 333 GGGNITSPYIGRANOEPPRSFTFNGVFEFTLSNPTRLQIQPWPAPFNLARGVEGEFES 392
Qy 421 FRNPQTFE---RGTYANSQPYESPGLOKDSLETPETTERPNVESYHRLSHIGLIS 477
Db 393 --TPNLSFTYRGIVY-----DSLTELPEEDNSVPPREBGVSHRLCHATFVQ 436
Qy 478 QSRVHV---PVYSWTHRSADRNTTISDSITQIPVKSFNLSGTSVSGPFTGDI 533
Db 437 RSGTPTLTGTVSWTHRSATLNTIDPERINQIPVKGFRVWGTSVITGPGTGDIL 496
Qy 534 RTNVNQSVLNMGANFNNTSLQRYRVRYVYASQ-----TMVLRYTVGSGTTPDQFP 586
Db 497 RNTTFDPSLVQVINSPIYQRYRLRFRVYASSDARIVLYLGAASGVGQVSVNMLQK 556
Qy 587 TMSANSLNSQSRFAFP-----VGISASGQFAGISISNAGRGQFHFPHXIE 635
Db 557 TMEIGENLHSTRTYRDFSNPSPFRANPDIIGISBQPLFAG-SISG---ELYIDKIE 611
Qy 636 FIPITATFEAYDLERAQAVNALFTNTNPRRLKTDVTDYHIDOVSNLVACLSDEFCLDE 695
Db 612 IILADATFEASDLERAQAVNALFTSSNQLGKTDTVDYHIDOVSNLVDCLSEFLCLDE 671
Qy 696 KRELLEKVKYAKRLSDERNLLQDPNFTSINKQDPFISTNEQSNFTSIHQSEHGMCSEN 755
Db 672 KRELSEKVKAKRLSDERNLLQDPNFRGINRQDP-----RQMGRSTD 713
Qy 756 ITIOEGNDVFKENYVTLPGTFNECYPTLYLQKIGESLAKAYTRQYLGITEDSODLEIYL 815
Db 714 ITIOGGDVKENYVTLPGTVDECYPTLYLQKIDESLAKAYTRYLGLYEDSODLEIYL 773
Qy 816 IRYNAKHETLDVPGTESVWPLSVESPIGRGCEPNRCAPHFEMNDLDCGRDCEKCAHNS 875

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Db 774 IRNAGHEIYVNGTSLWPLSAQSPGKCGEENRCAPHLEWNPDLDCSCRDEKCAHHS 833
Qy 876 HHESLDIDIGCTDLHENTLGVWVVFVKITQEGHARLGNLEFIEEKPPLGELASHVKAEEK 935
Db 834 HHTLIDIVGCTDLNEDLGWVVFVKITQEGHARLGNLEFIEEKPPLGELASHVKAEEK 893
Qy 936 WRDKREKLOETRYVTEAKEAVDALFVDSQVNRLOADTNIGMIHAADKLVRHIREAYLS 995
Db 894 WRDKREKLOETRYVTEAKEAVDALFVDSQVNRLOADTNIGMIHAADKLVRHIREAYLS 953
Qy 996 ELSVIGVNAALFEELBGRITTAISLYDARNVKNQDPNNGLACWVKGHVU-QQSHR 1054
Db 954 ELSVIGVNAALFEELBGRITTAISLYDARNVKNQDPNNGLACWVKGHVU-QQSHR 1013
Qy 1055 SVLVIVEMEAESQAVRVCGRGYILRVTAKEGYGECCTTIEIENNTDELKFKACEE 1114
Db 1014 SVLVIVEMEAESQAVRVCGRGYILRVTAKEGYGECCTTIEIENNTDELKFKACEE 1073
Qy 1115 EYVPTDGTGNDYTA---HQTAVCNRNAGYEDAYEDVTASVNYKPTYEETYTDR 1170
Db 1074 EYVPTDGTGNDYTA---HQTAVCNRNAGYEDAYEDVTASVNYKPTYEETYTDR 1131
Qy 1171 RDNHCEYDRGVVYPLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLME 1228
Db 1132 RENPCSNRGYDYTLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLME 1189

RESULT 11
US-10-200-522-2
Sequence 2, Application US/10200522
Publication No. US20030195336A1
GENERAL INFORMATION:
APPLICANT: Baum, Amy Jelen
APPLICANT: Gilmert, James A.
APPLICANT: Mettus, Anne Marie Light
TITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: MECO:213 (11792,0213 DVUS01)
CURRENT APPLICATION NUMBER: US/10/200,522
PRIOR FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 09/337,280
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 08/980,071
PRIOR FILING DATE: 1997-11-26
PRIOR APPLICATION NUMBER: 08/757,536
PRIOR FILING DATE: 1996-11-27
NUMBER OF SEQ ID NOS: 76
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2
LENGTH: 1189
TYPE: PRY
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Recombinant Delta Endotoxin
US-10-200-522-2

Query Match 54.0%; Score 3500.5; DB 14; Length 1189;
Best Local Similarity 57.0%; Pred. No. 2-be-259; Indels 109; Gaps 20;
Matches 717; Conservative 143; Mismatches 289;
Qy 7 NENEII--NALSIPAVSNHSTOMDLSPADIEDSLCIAEGNNINPLVASVOTGNIAG 64
Db 5 NQNGCIYVNCIS-----NPEVLLDGERISTGN-----SSIDISLVQ 43
Qy 65 RILGCVLGPVPAQIASTYSLVGEMLPRGRDOMEIFLEHYBOLINOITENAKNTALAL 124
Db 44 FLVSNF-VFGGFLVGLIDFVWVGIVP---SQWDAFLVOIEQLINERIASFARVAAATL 99
Qy 125 OGAGDSFRAYOOSLEWLENRDARTSVLYTOYIALDELPLNAMPFLAIRNOEVLPLW 184
Db 100 EGLGNPNFYVEAFKEWEEBPNPATRYIDRRILIDGLLEDRIFSFALSGFEVPLSV 159

Qy 185 YAOANLHLLLRDASLFGSEFGLTSQEIQRYYERQVQDTRQSDYCVKMYTGLNSLRG 244
Db 160 YAOANLHLLLRDASLFGSEFGLTSQEIQRYYERQVQDTRQSDYCVKMYTGLNSLRG 219
Qy 245 TNAASVVRNPFRRDITLGVLDVAFPSYDFRTYVINTSAQLTRVYTDALGATGVNMA 304
Db 220 STYQDMITNRLRRDLTLVLDIAFFPYDNRNRYIQGVQGLTRVYTDPL-----INFN 275
Qy 305 SNMWNVNNAPSFSAIETAVIRSPHLLDLEQLTIFSTSRWSATRMWYRHTIOSRPI 364
Db 276 POLQSAQPLTFVWESSAIRNPHLFDI LNNTLITFD---WFSVGNRFYWGGRVVISLI 332
Qy 365 GGGALNTSGTNTSINPRLSPFSRDYWTESYAVLL-----WGYLEPIHGVPTVRN 420
Db 333 GGGALNTSPYGRANDPFRSPFTNGPFRLLSNPTRLLOQWPAPFPNLRGVEGFEFS 392
Qy 421 FNPQNTPE---RGTAANYQAPYESPOLQKDSBELPPTETPERPNYESHRLSHIGLIS 477
Db 393 ---TPINSFTYRGRGV-----DSLTLEPREDNSVPRREGYSHRLCHATFVQ 436
Qy 478 OSRVH-----PYSWTHRSADRNTTISDSITQIPLVKSFNLSGTSVSGPFTGDI 533
Db 437 RSGTPLTLTGAVPSWTHRSATLNTIDPRINQIPVKGFRVWGTSVITGPFTGDI 496
Qy 534 RTVNGSVLSMGLNFNTSLQRYRVVRYAASQ-----TWLRTYVGGSTTFDQGFPS 586
Db 497 RRTFDPFVSLQVNIINSPIYORRLFRYAASSHDARIVLTGAATGVGQGVSNMPLQK 556
Qy 587 TMSANSLTSSPFAFP-----VGISAGSQTAGISINNAQRQTFHFDKIE 635
Db 557 THEIGNLTSKRYTYDFSGNPFSPFRANPOLIGISEBPLGAG-SISG-----ELYDKIE 611
Qy 636 FIPITAFEAEDLERAOAVNALFTNTPRLKTQVTDYHIDQVNLVACLSDEFCLDE 695
Db 612 IILADATFAESDLEBAQAVNALFTSSNOIGLKTQVTDYHIDQVNLVACLSDEFCLDE 671
Qy 696 KRELKRYKARLSEBRLDOPNPTSINKOPDFTSIBQSNFTSIHBSHKGWGSSEN 755
Db 672 KRELSEKVRHAKRLSEBRLDOPNFRGINRGD-----RGWGSTD 713
Qy 756 ITIOEGNDVFKENYVTLPGTFNECYPTYLYOKIGSELSKAYTRYQLRGYEDSQDLEIYL 815
Db 714 ITIOEGNDVFKENYVTLPGTFNECYPTYLYOKIGSELSKAYTRYQLRGYEDSQDLEIYL 773
Qy 816 IRNAGHEITLDVPGTESVWPLSVESPIGRGEBNRCAPHLEWNPDLDCSCRDEKCAHHS 875
Db 774 IRNAGHEIYVNGTSLWPLSAQSPGKCGEENRCAPHLEWNPDLDCSCRDEKCAHHS 833
Qy 876 HHESLDIDIGCTDLHENTLGVWVVFVKITQEGHARLGNLEFIEEKPPLGELASHVKAEEK 935
Db 834 HHTLIDIVGCTDLNEDLGWVVFVKITQEGHARLGNLEFIEEKPPLGELASHVKAEEK 893
Qy 936 WRDKREKLOETRYVTEAKEAVDALFVDSQVNRLOADTNIGMIHAADKLVRHIREAYLS 995
Db 894 WRDKREKLOETRYVTEAKEAVDALFVDSQVNRLOADTNIGMIHAADKLVRHIREAYLS 953
Qy 996 ELSVIGVNAALFEELBGRITTAISLYDARNVKNQDPNNGLACWVKGHVU-QQSHR 1054
Db 954 ELSVIGVNAALFEELBGRITTAISLYDARNVKNQDPNNGLACWVKGHVU-QQSHR 1013
Qy 1055 SVLVIVEMEAESQAVRVCGRGYILRVTAKEGYGECCTTIEIENNTDELKFKACEE 1114
Db 1014 SVLVIVEMEAESQAVRVCGRGYILRVTAKEGYGECCTTIEIENNTDELKFKACEE 1073
Qy 1115 EYVPTDGTGNDYTA---HQTAVCNRNAGYEDAYEDVTASVNYKPTYEETYTDR 1170
Db 1074 EYVPTDGTGNDYTA---HQTAVCNRNAGYEDAYEDVTASVNYKPTYEETYTDR 1131
Qy 1171 RDNHCEYDRGVVYPLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLME 1228
Db 1132 RENPCSNRGYDYTLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLME 1189


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RESULT 12
US-09-972-175-61
; Sequence 61, Application US/09972175
; Publication No. US20030101482A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
;           Gilmer, Amy Jelen
;           Mettue, Anne-Marie Light
; TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING
;                     LEPIDOPTERAN-ACTIVE-DELTA-ENDOTOXINS
; NUMBER OF SEQUENCES: 76
; CORRESPONDENCE ADDRESSES:
;   ADDRESSER: Arnold, White & Durkee
;   STREET: P.O. Box 4433
;   CITY: Houston
;   STATE: Texas
;   COUNTRY: USA
;   ZIP: 77210
; COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/09/972,175
;   FILING DATE: 05-Oct-2001
;   CLASSIFICATION: <Unknown>
;   APPLICATION DATA:
;   PRIOR APPLICATION NUMBER: 09/337,635
;   FILING DATE: <Unknown>
;   ATTORNEY/AGENT INFORMATION:
;   NAME: Kitchell, Barbara S.
;   REGISTRATION NUMBER: 33,928
;   TELECOMMUNICATION INFORMATION:
;   TELEPHONE: 512/418-3000
;   TELEFAX: 512/474-7577
; INFORMATION FOR SEQ ID NO: 61:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 1189 amino acids
;     TYPE: amino acid
;     TOPOLOGY: linear
;     MOLECULE TYPE: protein
;     SEQUENCE DESCRIPTION: SEQ ID NO: 61:
US-09-972-175-61

Query Match      54.0%; Score 3496.5; DB 10; Length 1189;
Best Local Similarity 56.9%; Pred. No. 5.8e-259; Indels 109; Gaps 20;
Matches 716; Conservative 143; Mismatches 290;

QY 7 NENEII--NALGIPIAVNSHSTOMDLSPARIEDSLCIAEGNNINPLVASTVGTGINAG 64
DB 5 NQNGCIPIYNCL-----NPEVLLDGERISTGN-----SSIDSLSLVQ 43
QY 65 RIIGVLCVPPAGIAGSYFLVGLMFRGDQEIFLEHVEQLINQITENANTALARL 124
DB 44 FLVSNF-VPGGFLVGLIDFVWGIVGP---SQWDAFLVQIEQLINERIAEFARNAALANL 99
QY 125 QGIGDSFPAVQGSLEMLERNDDARTRSVLYTOYIALDELFLAMLPFAIRNOVEPLLMY 164
DB 100 EGGNNFNIVAEFKWEEDPNPNPATRTRVIDRRILIDGLLEDDIPSPFDSIGFEVPLLSV 159
QY 185 YQAQANLHLILLADSLFGSEFGLTSQEIORYYERQVEQTRDYSYCVENYNTGLNSLRG 244
DB 160 YQAQANLHLILLADSLVIFGFRMGLITINVENENTRLRIHIDEADHCANTYNGNLNLP 219
QY 245 TNAASVVRNQFRDLTLGLVLDVALFPSTYTRTYPIINTSAQJTRVYTDAIGATGVNMA 304
DB 220 STYQDMITVYRLRLRDLTLTLTLDIAAFPPNDNRYPPIQPVGQLTRVYTDPL----INFN 275
QY 305 SMMWYNNMNPSPFAIETAVIRSPHLDLFEQLTIFSSWSMSATRHMTYRGHTIQGRPI 364
DB 276 PQLOSVAQLFTFVWMESSAIRNPHLFDLIANNLITFTD--WFSVGRNFYWGHRVLSLI 332

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QY 365 GGGINTSTHGSTNTSINPVLSPFSRDVYWTESYAGVL----WGYLEPIHGVPTVREN 420
DB 333 GGGNITSPYGRBANQPPRSFTFNGVFRLLSNPTRLLOQPPAPPPNLRGVEGVFS 392
QY 421 FRNPQTFE---RGTANYSQPYESPGQLKDSFELPPETTERPNYSSYRLSHIGLIS 477
DB 393 --TFPNSFTYRGRTV-----DSLTELPENSNVPRRGYSHRLCHATFVQ 436
QY 478 QSRVHV----PYVSWTRSDARTWTISSDSITQIPLKSFNLNSGTVSGPGFTGGDI 533
DB 437 RSGTFPLTGVVPSWTRSATLNTITPERINQIPLKGRVWGCTSVITGPGFTGGDI 496
QY 534 RTVNGSVLGMGLFNNTSLQRYRVRVYASQ-----TMVLRYVGSSTFDOGPPS 586
DB 497 RRTFPGDFVSLQVWINSPITQRYRLFRVYASSRDARVITLGAASTGVGGGVNMPLOK 556
QY 587 TMSANESLTQSPPFAFP-----VGISASSQTRAGISINNAQRQTHFDKIE 635
DB 557 TMEIGENLTSTRFTYDPSNPPSFRANDIIGISEQPLFGAG--SISSG---ELYIDKIE 611
QY 636 FIPITATFEABYDLERAQAVNALFTNTPRRLKTDVTDYHIDQVSNLVACTSDPECLDE 695
DB 612 ITLADATFEABSDLERQAKAVNALFTSSNOIGLKTVDYTHIDQVSNLVCLSDPECLDE 671
QY 696 KRELLEKYAKRLSDERNLLODPNFTSINKOPDFTSTNOSNFTSIHQSEHGMGSEN 755
DB 672 KRELSEKYAKAKLSDERNLLODPNFRGINRQPD-----RMRGSTD 713
QY 756 ITIOEGNDVYKENVYTLPGTFNRCYPTLYOKIGESLAKATRYQLRGYIEDSDLELYL 815
DB 714 ITIOGGDVPKENVYTLPGTVDECYPTLYOKIDESTLAKATRYELRGYIEDSDLELYL 773
QY 816 IRVNAKSETADVPGTESWVPLSYVSPFGRGCEPRNCAPHFEMNDLDCSRDGERCAHS 875
DB 774 IRVNAKEIYNVETGSLMPLSASPIGKCGEPRNCAPHBMDLDCSCDGERCAHS 833
QY 876 HHSFLDIDICTDLHENIYGVVVFKEIKTQEGHARLGNLEFLEPDLGELASRYKRAEK 935
DB 834 HHFTLIDIVGCTDLNEDLGWVVFKEIKTQDGHARLGNLEFLEPDLGELALARYKRAEK 893
QY 936 WRDKREKLQETKRYVTEAEAVDALFVDSQYRNLQADNIGMITHADKLVHRIREAYLS 995
DB 894 WRDKREKLQETINIVYKEAESVDALFVNSQYRLQVDTNIMTHADKLVHRIREAYLP 953
QY 996 ELSVIPGVNAIFEELEGRITITASLYDARNVKNQGNFNGGLGWNVKGHYDV-QQSHR 1054
DB 954 ELSVIRGVNAIFEELEGRIFTAYSLYDARNVKNQGNFNGGLGWNVKGHYDVEQNNHR 1013
QY 1055 SVLVIPMEAEVSOAVVCPGRGYILRVTAKEGYGECVTIHEIENNTDELKFKNCEE 1114
DB 1014 SVLVIPMEAEVQOAVRVCGRGYILRVTAKEGYGECVTIHEIENNTDELKFNKVEE 1073
QY 1115 EYVPTDGTGNDYTA---HGTAVCNRNAGYEDAVEYDTTASVNYKPYEETVYDVR 1170
DB 1074 EYVPMNTVTTCNNTYQOEYEGT--YTSRNQGYDEADGANNPSPADYASVYEEKSYDGR 1131
QY 1171 RDNHCEYDRGVYVYPLPAGYMTKELEYPEPTQKWIEIETGKFTVDSVELLAME 1228
DB 1132 RNPCHSNRGYGYTPLPAGYVTKDLFEPETQKWIEIETGKFTVDSVELLAME 1189

RESULT 13
US-10-200-522-61
; Sequence 61, Application US/10200522
; Publication No. US20030195336A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
;           Gilmer, Amy Jelen
;           Mettue, Anne Marie Light
; TITLE OF INVENTION: NUCLEIC ACID AND POLYPEPTIDE COMPOSITIONS ENCODING LEPIDOPTERAN-TR
; FILE REFERENCE: MECO:213 (11792.0213 DVUS01)

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CURRENT APPLICATION NUMBER: US/10/200,522
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 09/337,280
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 08/980,071
PRIOR FILING DATE: 1997-11-26
PRIOR APPLICATION NUMBER: 08/757,536
PRIOR FILING DATE: 1996-11-27
NUMBER OF SEQ ID NOS: 76
SOFTWARE: Patent version 3.1
SEQ ID NO 61
LENGTH: 1189
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Recombinant Delta Endotoxin
US-10-200-522-61

Query Match      54.0%; Score 3496.5; DB 14; Length 1189;
Best Local Similarity 56.9%; Pred. No. 5.8e-259;
Matches 716; Conservative 143; Mismatches 290; Indels 109; Gaps 20;

QY 7 NENEII--NALSTPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVGTGINIAG 64
DB 5 NQOQIPNCLN-----NPEVLIDGERISTGN-----SISISLSLVQ 43
QY 65 RILGVGVPPAGQIASFYSFLVGLMPPRGDWEIFLEHVEQLINQOITENANTALARL 124
DB 44 FLVSNF-VFEGGFLVGLIDFVWGIVP---SQMDAFVQEQILINRIAPANAIAIANL 99
QY 125 QGLGDSFRAVQOGLDMLNRRDARTRSVLYTYIALELDPLNAMPFAIRNOEVLPMV 184
DB 100 EGLGNFNIVYEAFAKEWEDPNPNPATRTVYIDRFRIIDGLLERDISFDISGFEVPLASV 159
QY 185 YAAANLHLILLDASLFGSEFGLTSGEIQRYTEROVEDRDSDYVEMVNTGINSARG 244
DB 160 YAAANLHLAILDSDVYFGERWGLTITVENENRLLRHIDEVADHCANTYNGNLNPA 219
QY 245 TNASVWRVYNOQFRDLTLGLDVALPFSYDRTYTPINTSAQUTREYVTDAGATGVNMA 304
DB 220 STYQDMITTYRLRLDLTLVLDIAAPFPNDNRPIQPGQUTREYVTDPL-----INFN 275
QY 305 SMMVNNNNAFSFAIETAVIRSPHLLDLEQLTIPSTSSWSATRHMTYWRGHTIOSRPI 364
DB 276 PQLOSAVQPLETFVNMESSAIRNPHLEFDILNNLTFTD---WFSVGRFVWCGHRVVISLI 332
QY 365 GGLANTSTHSTSTINPVALSFRSDRYVYTESAGVL---WGILYIEIHGVPTVREN 420
DB 333 GGGNITSPIYGRANOEPPRSFTFNGVFRTLSNPTLRLLQOPWAPAPFNLRGVEGVEFS 392
QY 421 FRNPONTFE---RGTAIVYQPYESPGLQLKQSETELPPTTERPNVESYSHLSHIGLIS 477
DB 393 --TFNLSFTYRKGCTV-----DSLTELPPEENSNVPRRGYSHRLCHATFVQ 436
QY 478 QSRVHV---PVYSWTHRSADRTNTTSSDSITQIPLVKSFNLSGTSVSGPGFTGDI 533
DB 437 RSGTPELTTSVFSWTHRSATLTNTTIDPERINQIPLVKGFRVWGTSVITGPGFTGDI 496
QY 534 RTVNVGSLVSMGLNPNNTSLORVRYRVYASQ-----TMLRLVYVGSSTFPGDFFS 586
DB 497 RRTTFGDFSLQVAINSPITQRYRLRIRYASSRARVITLGAASGTGGQVSNMPLQK 556
QY 587 TMSANESLTSQSFRFAFP-----VGISASGSGTQAGISINNAKQTFHFPKIE 635
DB 557 TMEIGENLTSRTRTYDFSNPFRANPDIIIGISEQLPGAQ--SISG-----ELIYDKIE 611
QY 636 FIPITATFEAYDLERAQEAVNALFTNTPRRLKTDVTDYHIDQVSNLVACLSDPECLDE 695
DB 612 IILADATFEAESDLERAQKAVNALFTSSNOIGLKTVDYHIDQVSNLVACLSDPECLDE 671
QY 696 KRELLENVYKAKULSDRNLLODPNFTSINKOPFISTEQNSNTSIHESHGCMWNGSEN 755
DB 672 KRELSEKVKAKRILSDERNLLODPNFRGINRQPD-----RGMWRSSTD 713

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QY 756 ITIOBGNDVFKENYVTLPGTFNECYPTYL YOKIGSELKAYTRYOLRGYIEDSQDEIYL 815
DB 714 ITIOGGDVFKEKNYVTLPGTVDECYPTYL YOKIDESKLAAYTRYELRGYIEDSQDEIYL 773
QY 816 IRYNAGHEFLDVPGRHSWPLVESPIGRGCEBNRCAPHEWNPDDLDSCRDDEKCAHNS 875
DB 774 IRYNAGHEFLVNPVGTSLWPLVKSQSPIGCGEENRCAPHEWNPDDLDSCRDDEKCAHNS 833
QY 876 HPSLIDIDIGCTDHNELGVMVVFVKITQEGHARLGNLFIEBKPLLGELSHVKAEKK 935
DB 834 HFTLTDIDVQCTDLNLDGVMVYFKITQDGHARLGNLEFBKPLLGELSHVKAEEK 893
QY 936 WRDREKQLETKRYVYTAKEAVDALFVDSQYNRLQADTNIGMIHAADKLVRHIREAYLS 995
DB 894 WRDREKQLETNIVYKEAKESVDALFVNSQYDRLQVDTNIAIMIHADKRVHIREAYLP 953
QY 996 ELSTVPGVNAALFEELEGRIITRAISLYDARNVYKNDPFGNGLACMVYKGVHVD--QOSHHR 1054
DB 954 ELSTVPGVNAALFEELEGRIITRAISLYDARNVYKNDPFGNGLACMVYKGVHVEQNNHR 1013
QY 1055 SVLVIPMEAEVSOAVRCPGRGYILRTVAYKEGYGEGCVTTHIEINNTDELKFKACEER 1114
DB 1014 SVLVIPMEAEVSOAVRCPGRGYILRTVAYKEGYGEGCVTTHIEINNTDELKFKSCVEE 1073
QY 1115 EYVPTDGTGNDYTA---HQTAVCSNAGYEDAYEVDTTASVNYKPTVEEYTYDVR 1170
DB 1074 EYVPNVTVCNNVTGQBEYEGT--YTSRNOGYDAEYGNNSVPADYASVYEKSYTDGR 1131
QY 1171 RDNHCEYDGYVNYPLPAGNMTKELEFPEDDKWIEIGETGKRIYDSVELLMEE 1228
DB 1132 RBNPCSNRNGYDGTPLPAGYVTKDLEYPEPDDKWIEIGETGTFIVDSVELLMEE 1189

RESULT 14
US-10-782-020-7
Sequence 7, Application US/10782020
Publication No. US20040197916A1
GENERAL INFORMATION:
APPLICANT: Carozzi, Nadine
APPLICANT: Hargies, Tracy
APPLICANT: Koziele, Michael G.
APPLICANT: Duck, Nicholas B.
APPLICANT: Carr, Brian
TITLE OF INVENTION: AXM1-004, A Delta-Endotoxin Gene and
FILE REFERENCE: 045600/274139
CURRENT APPLICATION NUMBER: US/10/782,020
CURRENT FILING DATE: 2004-02-19
PRIOR APPLICATION NUMBER: 60/448,810
PRIOR FILING DATE: 2003-02-20
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PaateSeq for Windows Version 4.0
SEQ ID NO 7
LENGTH: 1189
TYPE: PRT
ORGANISM: Bacillus thuringiensis
US-10-782-020-7

Query Match      54.0%; Score 3495.5; DB 16; Length 1189;
Best Local Similarity 56.9%; Pred. No. 6.9e-259;
Matches 716; Conservative 143; Mismatches 290; Indels 109; Gaps 20;

QY 7 NENEII--NALSTPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVGTGINIAG 64
DB 5 NQOQIPNCLN-----NPEVLIDGERISTGN-----SISISLSLVQ 43
QY 65 RILGVGVPPAGQIASFYSFLVGLMPPRGDWEIFLEHVEQLINQOITENANTALARL 124
DB 44 FLVSNF-VFEGGFLVGLIDFVWGIVP---SQMDAFVQEQILINRIAPANAIAIANL 99
QY 125 QGLGDSFRAVQOGLDMLNRRDARTRSVLYTYIALELDPLNAMPFAIRNOEVLPMV 184

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D	b	100	GGLGNGFNFIYVEAFKEMBEDPNPNPARTRVIDRFLRLLDGLLEBDDISFRISGFEVPLSV	150
Q	y	185	YAOAANHLHLLLRDASLFGSEFGLTSOEIQRYYERCOVEDOTRDSYCVEMYNLTGNSLRG	244
D	b	160	YAOAANHLALIRDSVIFGEERWGLATTINNENENRLLRHIDEYADICANTYNGNLNLPK	219
Q	y	245	TMAASWVYNOGRRLDTLGVLDVLFPSYDRTYVINTNSAOLTRVYVDAIGATGVMA	304
D	b	220	STYODWITYNRRRLDTLTVLDLIAAFPNYDNRRIYIQPVGQITREYVTDPL---INFN	275
Q	y	305	SMNWNNNAPSPESAIEAVIRASPHLDPFLEOLITFSTSSMSATRHMTYRGHTIOSRP	364
D	b	276	POLQSOVALPTNNWESSAIRPHLELDIANNLTIFD---WEVGNFTWGGHVRVSSLI	332
Q	y	365	GGLGTLSTHGSNTSINPRLSFPSSHVYWTBSYAGVLL---WGIYLEBHGVPVTFVN	420
D	b	333	GGGNITSPYCREANOEPFRSFTFNGVPRTLSPNLRLLQCPWAPAPFVLRGVEGEFS	392
Q	y	421	FRNPONTE---RGPNANSQPPYESPOLQKDESTLEPPTETERNPYESHRLSHIGLIS	477
D	b	393	--TTPNSFTYNGRGTV-----DSLTELPEBDNSVPPREGYSHRLLCHATFPVO	436
Q	y	478	OSRVHV----PYWSYTHRSADRNTNTSSDSITQIPLVKSFNLNSGSVYSGPFTGDI	533
D	b	437	RSGTFFLTGVVFSWTHRSALTLNTIDPRINDIPLVKGFRWVGGSVITGPPFTGDI	486
Q	y	534	RTNVNGSVLSMGLNFNNTSLQRYRVRYAASQ-----TWLRYTVGGSTTFDQGFPS	586
D	b	497	RNRTPGDFVSLQVINSPITQRYRLFRYASSRDARAVILTGAASGVGQVSVNMPLOK	556
Q	y	587	TMSANESLTSQSFRAEFP-----VGISASGSOTAGISINNAGROTFHFDKIE	635
D	b	557	TMEIGENLTSRYFTYDFSNPPSPFRANPDIIIGISEOPLFGAG-SISSG---ELYIDKIE	611
Q	y	636	FIPITATEAEKDLERRAOAVNALPNTNPRRLKTDTVYHIDOVNVLVACSDSEFCLDE	695
D	b	612	IILDATEABESDLERRAOAVNALFTSSNOIGLKTVDYTHIDOVNVLVDCSDSEFCLDE	671
Q	y	696	KRELEKVKYAKRLSDERNLQDPPNFTSINKOPDIFSTNEQSNFTSIHESSEHGMMGSEN	755
D	b	672	KRELSEKVKHAKRLSDERNLQDPPNRGINRQD-----RGMRGSTD	713
Q	y	756	ITIQBGNDVFKENIYTLTPTFNECPTIYLYOKIGSELSKAYTRYOLRGYIEDSODLEIYL	815
D	b	714	ITIOGSDVFKENIYTLTPTVDECPITYLYOKIDESKLAAYTRYELRGYIEDSODLEIYL	773
Q	y	816	IRYNAKHETLDVPGRESWPLSVESPIGCGEPNRCAPHPENMPDIDCSGROEKCAHNS	875
D	b	774	IRYNAKHETLVNPGTGLMPLVSAOSTIGCGEPNRCAPHPENMPDIDCSGROEKCAHNS	833
Q	y	876	HHPSLIDIGCTDHTENLGWVWVFKIKTOEGHARLGNLEFIEBKPLLGELSLSVKDAEKK	935
D	b	834	HHFTLIDIGCTDLNEDLGWVWVFKIKTODGHARLGNLEFIEBKPLLGELSLAVKDAEKK	893
Q	y	936	WRDKREKIQLETKRVTTEAKEAVDALFVDSQYNRLQADTNIGIHAADKLVHRIREAYLS	995
D	b	894	WRDKREKIQLETNIIYIYKEAKESVDALFVNSQYDRLQVDNTINAMITHAADKRVHRIREAYLP	953
Q	y	996	ELSVYPGNAIEFEELBGRITAIISLYDARNVYXNGDPNNGGLCAMVYKGHNDV--QOSHR	105
D	b	954	ELSVYPGNAIALFEELBGRITFAYSLYDARNVYKNGDPNNGGLCAMVYKGHNDVEEONNHR	101
Q	y	1055	SVLVIPEWEAEVSQAVRVCPRGGLYILRYAVAYEGYEGCVTTIHEINNTDELKFKCBBE	111
D	b	1014	SVLVIPEWEAEVSQAVRVCPRGGLYILRYAVAYEGYEGCVTTIHEIDNTDELKFSNCBE	107
Q	y	1115	EYVPTDGTCTNDYTA---HOGTAVCNSSNAGYEDAYEVDTTASVNYKPTYEETTYDVR	117
D	b	1074	EYVPTNITVTCNNYTGTOEBEYEST--YTSNQGDEAYGNNPSVADYASVYEKSYTDDG	113
Q	y	1171	RDNHCEYDGRVNVYRPLPAGWNTKLEAYPPEPDKWIEIGETRGKTYNSVELLMEB	1228
D	b	1132	RENPEESNRGGVDYRPLPAGVYTKOLEYFEPDKWIEIGETRGTYIVSVELLMEB	1189

[illegible]

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Db 557 TWEIGENLISRTFRYDFSNPFSFRANPDIIIGISBOPLFAG-SISSG---ELIYDKIE 611
Qy 636 FIPIATPFAEAYDLERAQEAVALFTNTNPRRLKTDVTDYHIDQVSNLVACLSDFCLE 695
Db 612 IILADATFEABSDLERAQKAVNALFTSSNIGLKTVDYTHIDQVSNLVCLSDFCLE 671
Qy 696 KRELLEKVKAKLSDERNLLQDPNFTSINKOPDFISTNEQSNFTSIHEQSEHGWSSEN 755
Db 672 KRELSEKVKAKLSDERNLLQDPNFRGINROPD-----RGMRGSTD 713
Qy 756 ITIOEGNDVFKENAVTLPGTFNFCPTLYOKIGESELKAYTRYOLRGYIEDSODLEIYL 815
Db 714 ITIOEGNDVFKENAVTLPGTVECPYLYOKIDESKAKAYTRYELRGYIEDSODLEIYL 773
Qy 816 IRYNAHETLDVPGTESVWPLSVESPIGRGCEPNRCAPHFEMNPDLDSCSRDEKCAHS 875
Db 774 IRYNAHETLVNPGTSLWPLSAOSPICKGCEPNRCAPHLENNPDLDSCSRDEKCAHS 833
Qy 876 HHSLSLDIDIGCTDLHENLGVWVVKITQDGHARLGNLFIEBKPLIGELSRVKAEEK 935
Db 834 HHFTLIDIVGCTDLNEDLGWVIFKIKTODGHARLGNLFIEBKPLIGELSRVKAEEK 893
Qy 936 WRDKREKLOJETRKYTEAKAVALFVDSOYNRLQADTIGMTHADKLVHRIREAYLS 995
Db 894 WRDKREKLOJETNIVYKEAKESVDALFVNSQYDRLQVDTINAMTHADKRVHRIREAYLP 953
Qy 996 ELISVPGVNAEIFEELLEGRIITTAISLYDARNVYNGDFNNGLACWNYKGVHDV-QOSHR 1054
Db 954 ELISVPGVNAEIFEELLEGRIFTAISLYDARNVINKGDFNNGLACWNYKGVHDVEQNNHR 1013
Qy 1055 SVLVIPBWEAEVSQAVRVCPRGYIILAVTAYKSGYEGCVTIHEIENNTDELKRCCEE 1114
Db 1014 SVLVIPBWEAEVSQAEVRVCPRGYIILAVTAYKSGYEGCVTIHEIEDNTDELKFSNCVEE 1073
Qy 1115 EYVPTDGTGNDYTA---HQTAVCNSTRAGYEDAYEVDITASVNYKPTYEBEYTDVR 1170
Db 1074 EYVPTNVTICNNYITGOEBEYGT--YTSRNOGIDEAGNNPSVPADYASVYEKSYTDGR 1131
Qy 1171 RDNHCEYDRGYVYVPLPAGYMTKELEYFPETDKWIEIGETGKFIYDSVELLMEE 1228
Db 1132 RBNPCSSNRGYGYTPLPAGYVTKDLEYFPETDKWIEIGETGTFIVDSVELLMEE 1189
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